JORDAN CAMPUS
MASTER PLAN

SALT LAKE COMMUNITY COLLEGE

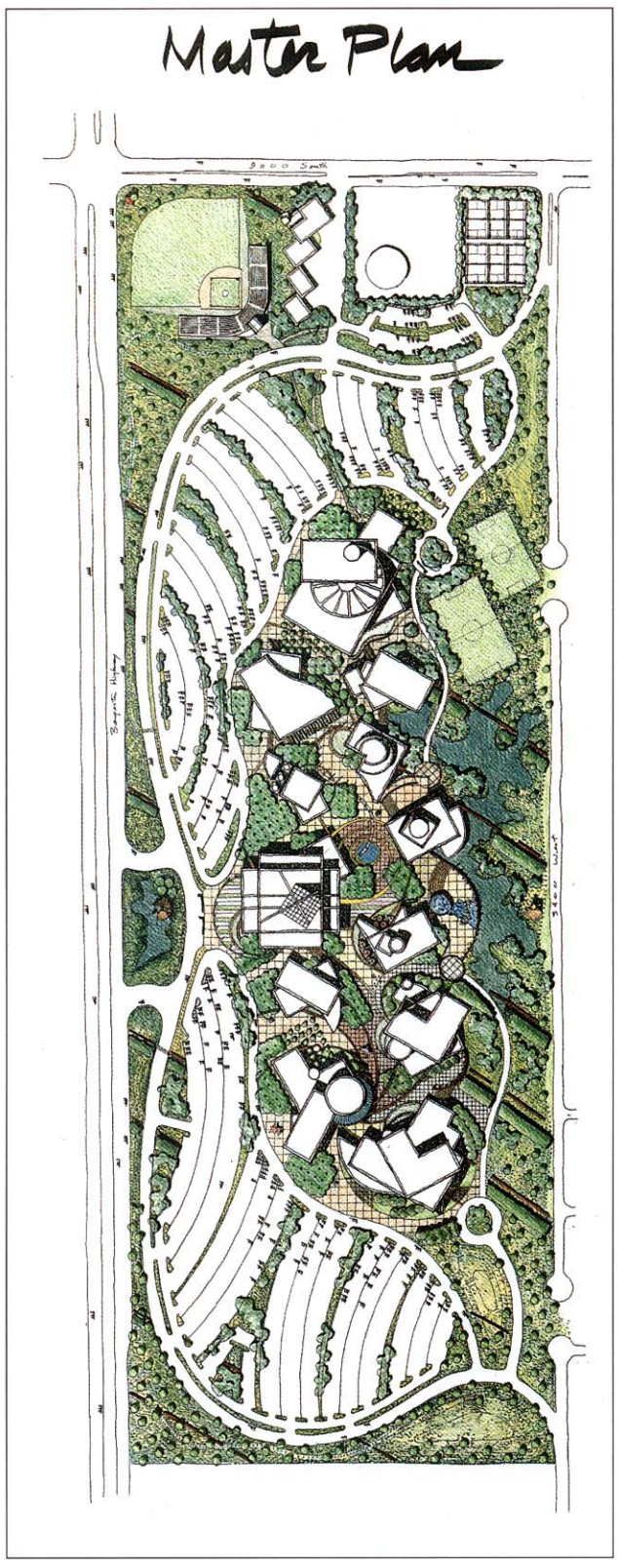
DFCM NUMBER RL95024

15 FEBRUARY 1997

State of Utah – Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

HART FISHER SMITH & ASSOCIATES
EDAW / IRA FINK & ASSOCIATES / LAURA BAYER



COLLEGE NEED

Current projections indicate that Salt Lake Community College will require an additional 1,185,826 square feet of teaching space to meet the anticipated increase in student class hours by the year 2015. This demand cannot be met through increased efficiency, expansion of existing college campuses and learning sites, the increased application of technology-enhanced instruction, or a combination of these factors. Existing SLCC facilities are already used at the highest efficiency of any state institution of higher education, existing campuses and sites are approaching build-out, and the most optimistic scenarios for the development of alternate delivery systems still require the construction of significant amounts of space to serve the anticipated student population. Recognizing this need, in 1992 the college, with the approval of the Board of Trustees, the Board of Regents, and the Building Board, used funds appropriated by the legislature to purchase a site in the south valley service area, where the greatest growth is projected.

THE MASTERPLAN VISION

This masterplan provides a guideline for the phased development of that site, with a potential capacity of 1,300,000 square feet of construction plus associated landscaping and infrastructure. It identifies a technology-enhanced community learning center as the core and first phase of campus development. The plan assumes that the campus will grow outward from that center as needed to meet future demand for educational services.

The masterplan calls for a 21st-century campus that will foster innovation in learning. Its buildings will be nestled in the hillside, following existing site contours. Development will be based on a system of three superimposed grids that allow designers to take advantage of solar orientation, views, and the historic orthogonal organization of the city to create a campus of clustered buildings with a village character. At the heart of the campus, a series of pedestrian courts will link all of the facilities at a single grade to provide convenient access for the disabled and the elderly. Building height and mass will be reduced so that the campus remains in harmony with the rhythm and scale of the site and the neighborhood. Landscaping will include the creation of outdoor learning-resource areas and the selection of climate-tolerant plants to reduce water use. Designers have identified a material palette and an architectural vocabulary that will be compatible with the scale and character of the surrounding region and create an identity appropriate to the college context. A central utility system, designed with the flexibility to accommodate change, will support the technology of the present and the future efficiently. While ample parking has been allowed, the plan will also provide convenient access to encourage the use of mass transit and pathways to accommodate pedestrians and bicycles. Planners have identified many potential partners in campus development, and the plan provides space for a fire- and emergency-service- substation to be developed jointly by West Jordan and South Jordan.

With the development of this masterplan, Salt Lake Community College hopes to continue its tradition of excellence in community-focused general, technical, and continuing education, to be a good neighbor to the residents of South Jordan and West Jordan, and to provide innovative facilities that can meet the instructional needs of the next century in an efficient and responsible manner.

THE PLANNING PROCESS

Salt Lake Community College made a commitment to the definition of a planning process that would be open, participatory, and consensus-based, with the goal of obtaining as much input as possible from all affected by the project, including members of the college, the community, and public agencies. The immediacy of the need dictated a fast-track schedule. For the first weeks of the project, participants gathered base data, compiled background information, and interviewed 16 key members of the college community and more than 40 neighborhood residents and members of the larger community. Faculty, staff, students, community agencies, neighborhood residents, and representatives of various state agencies were invited and encouraged to attend the planning sessions. The actual planning was accomplished and drawings were produced in two three-day workshop sessions, separated by a week for comment and reflection. Special sessions were scheduled for faculty and community review, planners attended neighborhood meetings, and drawings were posted for comment throughout the planning period. At the conclusion of the planning process, the proposed masterplan was adopted by a unanimous vote of the steering committee, approved by a unanimous vote of participating neighborhood residents, and accepted by participating faculty, students, and other interested parties.

CONTENTS

EXECUTIVE SUMMARY ..... **I**

INTRODUCTION **1**

OVERVIEW 1

ORGANIZATION OF DOCUMENT 1

IDENTIFICATION OF PARTICIPANTS 2

Steering Committee 2
Planning Team 2
SLCC 2
Community Government and Agency Representatives 3
Additional Community Participants 3
Participants Representing State Agencies and Other Non-Campus Interests 3
DFCM 3

BACKGROUND AND INITIAL ASSUMPTIONS **5**

SALT LAKE COMMUNITY COLLEGE 5

Acquisition of the 90th South Site 5
College Mission and Values 5
Student Profile 6
Initial Planning Efforts for the 90th South Site 6
Documentation of College Concerns & Assumptions for the 90th South Site 7
Key SLCC Visions and Issues 7
SLCC Vision Statements 7
Campus Identity and Environment 7
Educational Environment 7
Academic Operations 8
Technology Enhancement and Innovation 8
Community Role 8
Site Planning 8
Facilities Planning 8
Pitfalls to Avoid 8

COMMUNITY & NON-CAMPUS PARTICIPANTS 9

Documenting Community Visions and Concerns for the 90th South Campus 9
Community Composition 9
South Jordan 9
West Jordan 9
Other Participants 9

Community Visions and Concerns 9
Role of SLCC Campus 9
College Programs at 90th South 10
Location, Traffic, and Access 10
Impact on City Services 10
Community Design Issues 10
Campus Name 11

Others' Visions and Concerns 11
Higher Education Mandate 11
Level of Policy Determination 11
Duplication of Facilities and Programs 11
Campus Experience 11
Role of Technology in Future Education 11
Cooperative Ventures 11

Potential Partnerships in Campus Development 12

STATE DIVISION OF FACILITIES CONSTRUCTION & MANAGEMENT 13

Background, Guidelines, and Items to Consider in Masterplanning 13

Space Allocation Standards and Assumptions for SLCC 13
Space Allocations for SLCC (All Campuses) 14
State Space Standards and Factors for SLCC 14
90th South Campus Space Requirements for Various Enrollments 15
Distribution of Projected Building Area by Space Type for 1,000 FTE Students 15

CONTENTS

THE PLANNING WORKSHOPS 17

DEFINITION OF MISSION, VISION, AND GOALS AND OBJECTIVES 17

Initial Session: The Wall of Wishes and the Campus of Today and Tomorrow 17
Vision Statement 17
Campus Character 17
Campus Types to Be Considered in the Workshop 18

CONCEPT PLANS DEVELOPED IN THE FIRST SESSION 18

REVIEW OF FIRST SESSION CONCEPT PLANS 19
Traffic Concerns 19
Bangerter Access 19
Outdoor Recreation 19
Location of Buildings 19
Focus of Campus 19
Faculty Concerns 19
Campus Composition 20
Landscape 20
Directions to Pursue 20

SECOND DAY REVIEWS AND RESPONSES 20

Traditional Campus 20
Campus as Community 20

CONCLUDING SCENARIOS, FIRST SESSION 20

INTERIM COMMENT PERIOD 21

Faculty and Staff Concerns 21
Student Concerns 21
Community Concerns 21
Steering Committee Concerns 22

DIRECTIONS FOR THE SECOND SESSION 22

Parking 22
Access 22
Service 22
Utilities 22
Phasing 22
Building Area and Phasing 22

BUILDING PROFILE AND IMAGE 23

CONCLUSION OF WORKSHOP SESSIONS 23

THE MASTERPLAN CONCEPT 25

DESIGN CONCEPT 25

Masterplan Approach 25
Organizational Concept: Superimposed Grids 25
Materials and Forms 25

PROGRAMMATIC ASSUMPTIONS 26

Site Capacity 26
Anticipated Phasing 26
Integration of the Arts 26
History and Tradition 26
Imagery 26

LANDSCAPE ASSUMPTIONS 27

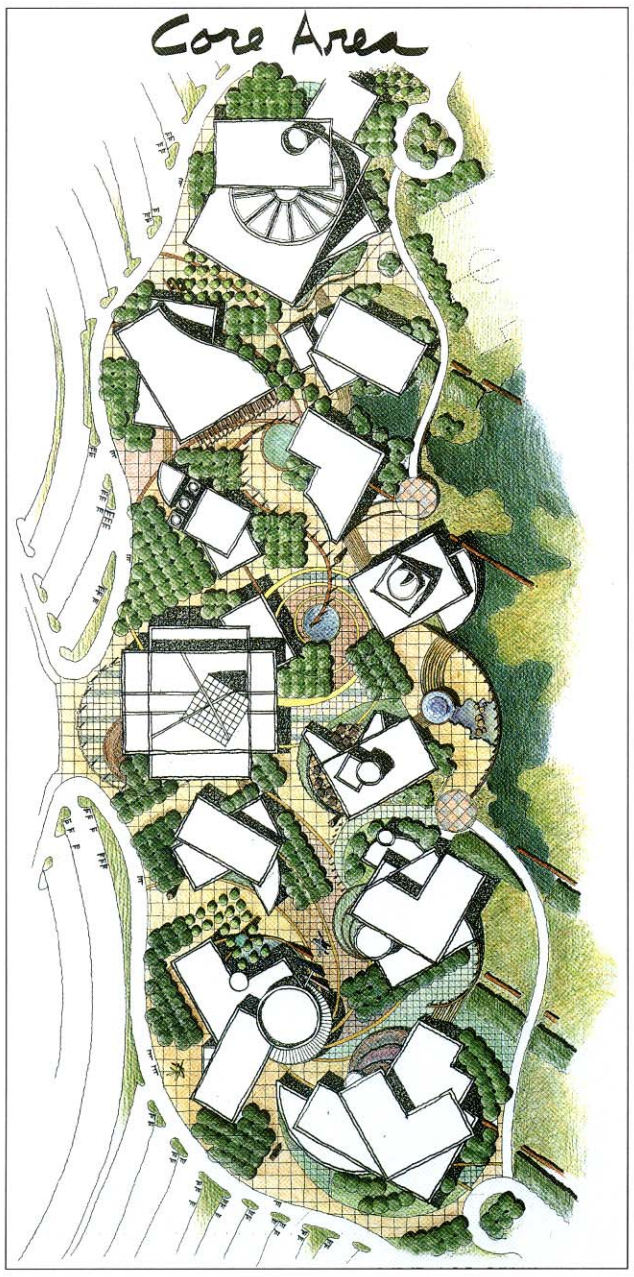
Landscape Concept 27
Respect for the Environment 27
The Green Edge 27
Campus Entry and Identity 27
Recreational Development 27

LOCATION OF FUNCTIONS 28

UTILITIES AND SERVICE 30

TRANSIT ASSUMPTIONS 31

COMPLETED DFCM CHECKLIST 32



OVERVIEW

This masterplan is the result of an open community planning process completed in February and March 1996. After an initial two-week period spent in information-gathering, the entire team and interested participants from the college, the state, and the communities of West Jordan and South Jordan were involved in an active, hands-on, consensus-based planning process that focused on two three-day sessions in which the masterplan drawings were produced.

Through this intensive process, participants considered a spectrum of options for the siting, organization, composition, orientation, and design character of the campus. Regular open critique sessions guided the evolution of concept plans. A general review was held each morning to begin the session at 8:30 a.m., and special daily reviews were scheduled at 3:00 for SLCC faculty, staff, and students, and at 6:00 for community residents. The two three-day sessions were separated by a week for reflection and comment. During this interim period, the drawings were posted in the College Center at the Salt Lake Community College Redwood Road Campus and in the east lobby of the South City Campus with blank sheets available to allow interested parties to record their comments. The final direction was adopted after unanimous votes of the SLCC steering committee and neighborhood representatives, with the approval of all who participated in the process.

ORGANIZATION OF THIS DOCUMENT

This document has been organized in three sections that mirror the planning process.

1. **Background and Preliminary Assumptions**: Part 1 contains a variety of background information, including
   - site data gathered by the planning team
   - a summary of previous planning efforts
   - the initial visions and concerns identified by participants representing Salt Lake Community College
   - the initial visions and concerns expressed by community members and others with an interest in the project
   - guidelines established by the State Division of Facilities Construction and Management.

2. **The Workshop Sessions**: Part 2 documents the evolution of the masterplan concept during the workshop and review sessions, including
   - concepts explored
   - criticisms and concerns raised
   - responses to these reviews

3. **The 90th South Campus Masterplan**: Part 3 contains copies of the masterplan drawings and a summary of the guidelines implicit in these drawings.

PARTICIPANTS

SALT LAKE COMMUNITY COLLEGE STEERING COMMITTEE

Gordon Storrs (Co-*Chair)*	Master Planning Coordinator
Paul R. Gundersen (*Co-Chair)*	Director of Facilities
Robert L. Askerlund	Assistant Director, Facilities
Laura M. Bayer	Program/Development Consultant
Ann N. Erickson, Ph.D.	Vice President for Academic Services
David H. Hart, AIA	Design Principal, Hart Fisher Smith & Associates
Michael M. Homer, Ed.D.	Dean, School of Business and Industry
Benjamin Hutchinson	Project Coordinator State Division of Facilities Construction & Management
Carl D. Meyer	Project Manager, Facilities
Judd Morgan	Vice President for Student Services
Kenneth Orgill	Director of Information Technology
Richard M. Rhodes, Ph.D.	Vice President for Business Services
Norman Riggs, Ph.D.	Member, SLCC Board of Trustees
David K. Stauffer	Architect, Facilities
Francis J. Serpa, Ph.D. *(Faculty Senate Representative)*	Assistant Professor, Social Science
Barry W. Smith, AIA	Principal in Charge, Hart Fisher Smith & Associates
L. Jay Willliams	Director of Public Information
Maurene Williams	Administrative Assistant, Office of Planning & Research

PLANNING TEAM

Hart Fisher Smith & Associates, Inc. — **Design Team Leader**
Architecture, Programming & Planning

David H. Hart, AIA, Design Principal
Barry Smith, AIA, Principal in Charge
Robyn Ireland, Team Member
Christine Barton, Team Member
Troy McComber, Team Member

EDAW, Inc. — **Planning and Landscape Design**

Russell Butler, ASLA
Richard Flierl
Jeffrey Rapson

Ira Fink & Associates — **Program/ Development Consultant**
Ira Fink, Ph.D. — *College & University Planning*

Laura Bayer — **Program/Development Consultant**
Community Involvement & Masterplan Document

Francom Associates, Inc. — **Civil Engineering Consultants**

Bennion Associates, Inc. — **Mechanical Engineering Consultants**
E. Mervin Bennion, Principal

Spectrum Professional Services — **Electrical Engineering Consultants**
Stewart Greene

SLCC PARTICIPANTS

Frank W. Budd, SLCC President

John Anjewierden	Deneece Huftalin	David Richardson
Dave Ballard	Carlos Jimenez	Ron Riddle
Kip Billings	Larry Landward	Paco Salazar
Geoffrey Brugger	John Latkiewicz	Nancy Sanchez
Norma Carr	Steve Mansfield	Helen Sheppard
Kent Ferrel	Don Merill	Helen Stringham
Kay Fulton	John Murphy	Bob Trim
Brent Goodfellow	Irina Nelson	Dana Van Dyke
Pat Hadley	Katy Partridge	Eric Weber
Mark Hamilton	Barbara Pomeranz	Clark Whitehead
Marv Hawkins	Bob Price	Mario Zuniga
Steve Hens		

the members of the steering committee, and many others who responded to the invitation to join the planning sessions but did not record their names.

COMMUNITY PARTICIPANTS
Community Government and Agency Representatives

South Jordan

Theron Hutchings, Mayor
Dennis Larkin,
Interim Community Development Director
Keith Snarr, Economic Development Director
Judy Hansen, City Planner
Jodi Ketelsen, Long-Range Planner
Dave Millheim, City Administrator
Gordon Haight,
Public Works Director and City Engineer
Gary Whatcott, Chief, Fire Department
Doug Carlile, City Council Member
Tom Christensen, City Council Member
Mary Lynn Liddiard, City Council Member
Richard Warne, City Council Member
Kevin Romph, Chair, Planning Commission
Brent Arnold, Planning Commission
Bradley Marlor, Planning Commission
Richard Allen, Planning Commission
Matt Sellers, Planning Commission

West Jordan

Max Hogan, West Jordan Mayor
Dan Dahlgren, City Manager
D. Robert Davis,
Development Services Director
L. Clarke McFarlane, City Engineer
Brian W. Maxfield, City Planner
Barry Snooks, Chief, Fire Department
Kevin Merrin, Fire Marshall
Jay Bowcott, City Council Member
Michael DeMass, City Council Member
Margaret Grochocki, City Council Member
Gordon Haight, City Council Member
Brian Pifts, City Council Member
David Stevens Plouzek, City Council Member

Additional Workshop and Meeting Participants from the Community

Janice Allred
Steve Allred
Colleen Barlow
Hyrum Barlow
Reed Barlow
Kim Barrow
Karen Barrow
Gary Beutler
Nellie Christensen
Steve Christensen
Dave Clough
Brent Cook
Stan Dimond
Roger Dimond
Vivian Dimond
Ron Duffin
Tom Judd
Clarie Knapton
David Knapton
Clark Labrum
Greg Larson
Jen Larson
Ken Leetham
Bill Mumford
Carrie Mumford
Jim Null
Linda Null
Rick Olsen
Bret Pangos
Sally Pangos
Tura Partridge
Cindy Petersen
Craig Petersen
Kristen Peterson
Steve G. Peterson
Danalee Rice
Terry Rich
Beverly Rineck
Ron Rineck
Brian Sorensen
Kat Sorensen
John Spencer
Terri Spencer
Neil Sumsion
Jack Terry
Judy Terry
Jill Thompson
Randy Thompson
Tim Troester
Tricia Troester
Steve Van De Merwe
Vickie Van De Merwe
Alanna Warnick
Silvan Warnick
Kristine Yates

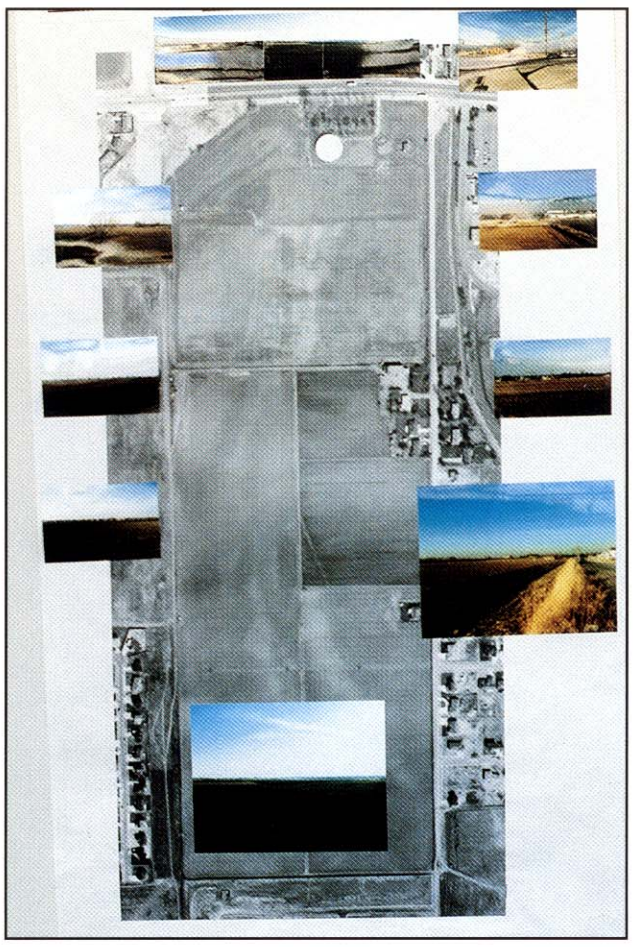
and many others who responded to the invitation to participate in interviews, neighborhood meetings, city council sessions, and planning sessions but did not record their names.

PARTICIPANTS REPRESENTING STATE AGENCIES AND OTHER COMMUNITY INTERESTS

Boyd Garriott, Higher Education Analyst	State Fiscal Analyst's Office
John Massey, Legislative Analyst	State Fiscal Analyst's Office
Evelyn B. Lee, Chair	State Committee for Higher Education Long-Range Planning
Don Carpenter, Associate Commissioner for Planning	State Board of Regents
Fred Martin, Facilities Implementation	Utah Transit Authority
Randy Park, Transit Planner	Utah Transit Authority
David Beecher	Utah Transit Authority
Norm Tarbox, Aide to Governor Leavitt	Governor's Office
Ann Racer, Project Architect	University of Utah Campus Planning
Jerilyn McIntyre, Vice President, Academic Affairs	University of Utah
Harold Bonella	Mountain Fuel
Jim Bradbury	US West
Daniel C. Larsen	Utah Power & Light
Jeff Bryant	Water Conservancy
Byron Parker	Assistant Director, Region 2, Utah Department of Transportation
Carlos Braceres	Design Squad Leader, Utah Department of Transportation
Einar Johnson	State Risk Management

State Division of Facilities Construction and Management (DFCM)

Richard Byfield	Director
Wayne Bingham, AIA	Building Program Director
Rick James, AIA	Lead Project Manager
Ben Hutchinson	Project Coordinator for SLCC
Craig Westmann	Mechanical Engineering Review
Gaylon Rogers	Electrical Engineering Review



ACQUISITION OF THE 90TH SOUTH SITE

Demographic projections and space needs in the following paragraphs have been taken from Salt Lake Community College Facility Master Plan, Population, Participation Rate, and Capacity Study, *pp. 19 and 28, and from the report of Paulien and Associates*, State of Utah Higher Education Space Standards and Utilization Study, *pp. 54 and 75.*

Salt Lake Community College (SLCC) provides a diverse array of educational opportunities and services to the community, including general education, transfer, occupational, and certificate programs, continuing and adult education, concurrent enrollment courses for high school students, workshops and short classes, and an extensive range of campus learning activities in the fine and performing arts, applied arts, and physical education. Throughout its history, the college has maintained an active commitment not only to serving students in a classroom setting but also to reaching out to involve the broader community by providing activities, programs, and resources at its campuses, through electronic and media services, and within the communities it serves. As the population in the Salt Lake Valley has grown, the center of the population has shifted to the south and west. Salt Lake Community College has considered a variety of options that would bring its resources and programs to the major population center developing in the south and west valley. By the early 1990s, it had become apparent that the college would need additional resources to fulfill its educational mission in the 21st century.

Recent projections indicate that Salt Lake Community College will require an additional 265,392 square feet of educational and general space by the year 2004, or an additional 1,185,826 square feet by the year 2015. By far the greatest percentage of this growth will occur in the "West Jordan service area" (which includes West Jordan, South Jordan, Midvale, Riverton, Draper, and Sandy). In twenty years, the population and the projected head-count students in this service region will be virtually as high as that in the Redwood Road service area.

This demand cannot be met through increased efficiency, expansion of existing college campuses and learning sites, the increased application of technology-enhanced instruction, or a combination of these factors. Existing SLCC facilities are already used at the highest efficiency of any state institution of higher education, existing campuses and sites are approaching build-out, and the most optimistic scenarios using alternate delivery still call for construction of 60% of the square-footage requirements projected for all institutions and would actually increase projected construction on community college campuses by a factor between 6 and 33 percent (*State of Utah Higher Education Space Standards and Utilization Study,* p. 75).

Recognizing that it would be desirable to locate new facilities closer to the center of growth, in 1992 the college conducted a detailed review of four potential sites for future campus development in the southern portion of the Salt Lake Valley. Site investigations included detailed appraisals, which considered land values, existing utilities, soil, drainage, adjacent street improvements and traffic, visibility, access, easements, indications of hazardous substances, zoning, flood hazards, seismic risks, availability of water rights, and financial feasibility. The Site Selection Task Force recommended that the college purchase a 114-acre site that lies within the communities of South Jordan and West Jordan. The site boundaries are defined by 90th South (on the north), 3400 West (on the east), approximately 96th South (on the south), and the proposed Bangerter Highway easement (on the west). After a thorough review, Salt Lake Community College, the Board of Trustees, and the Board of Regents approved the purchase of this site with funds appropriated by the Legislature.

COLLEGE MISSION AND VALUES

Planning for the new campus was guided throughout by the following statements of mission and values, defined and adopted by Salt Lake Community College prior to the masterplanning process.

College Mission Statement

> "Salt Lake Community College is a multi-campus, comprehensive institution serving a diverse population through lifelong education. Our mission focuses on student needs in an open door setting. We are committed to:

- **Vocational and Technical Education** resulting in marketable job skills in a changing world,
- **General Education and Pre-professional Programs** for transfer to other colleges and universities,
- **Adult and Continuing Education** in cooperation with business and industry to enrich the opportunities of citizens,
- **Developmental Education** designed to support students making a special transition to college life,
- **Community Services Education** providing services and activities that promote community involvement, and

to **student services** which support education and promote responsible choices through college-wide programs and activities."

College Values

"We, the faculty, staff, and students of Salt Lake Community College applaud and reaffirm our comprehensive community college mission. Our business is teaching and learning. We are committed to building our community through vocational / applied technology education, developmental education, transfer education, community education, strong student support, lifelong learning, and business and economic development.

- **Community:** We value community involvement and economic development.
- **Creativity**: We value creativity, innovation, and responsible risk-taking.
- **Diversity**: We value personal, cultural, and ethnic diversity.
- **Environment:** We value an accessible, safe, clean, and aesthetically pleasing environment.
- **Excellence**: We value quality education and professional excellence.
- **Expression**: We value responsible personal, academic, and expressive freedom without harassment, intimidation, or other destructive behaviors.
- **Integrity**: We value integrity, responsibility, honesty, and ethical conduct.
- **People**: We value each student, faculty, and staff member and believe that all should be treated with care, equity, respect, and empathy. We value opportunity for growth, recognition, and reward."

STUDENT PROFILE

A high percentage of SLCC students are working full- or part-time in addition to attending classes, and many have family and community obligations as well. Of all the state institutions of higher education, SLCC serves the highest percentage of Utah's disabled students. The college has a longstanding commitment to providing services for this population. Projections indicate that the largest component of the student population in the coming years will be the 25-49 year old age group and that a significant proportion of the student body will be in the 50+ age group, with the average student age tending to increase as more adults seek retraining and additional educational opportunities. The college also offers concurrent courses for high school students, and, as a result of participation in cooperative programs with schools in many countries, is becoming a magnet for international students.

INITIAL PLANNING EFFORTS FOR THE 90TH SOUTH SITE

The following material is summarized from a report presented by David Stauffer, SLCC Architect, 21 February 1996.

In March 1994 SLCC hosted a one-day intensive planning charette to develop a conceptual plan for the 90th South site. Participants included college administrators, faculty, staff, and students; representatives of the State Division of Facilities

Construction and Management and the Board of Regents; and community residents. Participants defined a full-service campus, to be developed in phases, that would include facilities for general, technical, vocational, and continuing education but would not unnecessarily duplicate expensive resources or specialized programs available elsewhere. After exploring six schemes, participants developed a plan that confined parking to the west edge of the site, created a major entry and bus turnaround on 3400 South, and clustered buildings in two loops, one on either side of that entry. Planners concluded that future efforts should focus on defining the mission of the campus, discussing technological issues, and expanding the college's partnership with South Jordan and West Jordan.

DOCUMENTATION OF COLLEGE CONCERNS AND ASSUMPTIONS FOR THE 90TH SOUTH SITE

In January 1996 the college selected the design team of Hart Fisher Smith & Associates and appointed a steering committee to guide the masterplanning for a new campus at the 90th South site. The steering committee began by reviewing existing assumptions, visions, and concerns for the new campus, and by identifying sixteen key members of the college community who would be interviewed during preliminary planning. Dr. Ira Fink, of Ira Fink and Associates, Inc., and David Hart of Hart Fisher Smith & Associates, Inc., then met with these individuals to ask what their visions for the 90th South Campus were, what three issues each considered most important to address, and what three pitfalls each hoped that the new campus would avoid. While this information was being analyzed, invitations were sent to encourage faculty, students, and staff to attend the masterplanning workshops.

KEY SLCC VISIONS AND ISSUES

The following material relies primarily on the material gathered by Ira Fink, Ph.D., of Ira Fink and Associates, Inc., in a series of interviews conducted at Salt Lake Community College 7 and 8 February 1996 and summarized in his report of 13 February 1996. This material has been condensed to provide an introductory overview here; comments from the notes of other participants have also been included.

SLCC Vision Statements: Those interviewed agreed that the 90th South site should be developed as a full-service community college campus, with close physical and electronic links to existing SLCC campuses and sites. Students on this new campus should have seamless access to credit and non-credit programs and to the four-year state institutions of higher education. As a physical place, the campus should provide an aesthetically pleasing environment for creative learning, a meeting place for members of college and community, and an opportunity for students to combine academic instruction with experience working with others. The campus should be both a model for and an agent of change in higher education. State-of-the-art electronic and technological resources, combined with the flexibility to incorporate the resources and learning tools of the future, will be essential to an educational process that is expected to be increasingly interdisciplinary, dynamic, flexible, and committed to the use of information technology to enhance the learning experience.

Campus Identity and Environment: Through its physical presence, the new campus should make a design statement that reflects the college's unique educational mission, projects a strong public identity, and creates an environment that is warm, inviting, open, flexible, and conducive to learning both in and out of the classroom. It should express and encourage the integration of all learning disciplines, including the applied arts, physical and social sciences, and the humanities. The campus should celebrate traditions, provide recognition for individuals of all backgrounds including the disabled and the economically disadvantaged, and promote experiences and activities that encourage members of different worldwide cultures to work together. It must include spaces for activities that enrich life -- gathering and meeting places associated with teaching spaces, spaces at human scale, spaces designed to accommodate cultural and recreational activities, and opportunities for environmental education. The campus should offer services for faculty and staff as well as "one-stop" student services.

Educational Environment: The new SLCC campus must create an environment that allows the college to provide the full range of mental, social, and physical education for an increasingly diverse student body that will include high school students, students returning to campus for retraining or additional education, students seeking instruction on demand, students sponsored by agencies, and seniors and retired individuals as well as traditional students. To serve this population, the campus will need educational spaces that can, with appropriate scheduling, accommodate groups

of various sizes and individuals engaged in learning activities that may vary from a few hours to a full term in duration.

Academic Operations: The new campus should offer students access to all of the College's general education offerings without duplicating high-cost limited-enrollment programs currently available at other sites. The learning experience on this campus should emphasize inter-connectivity and partnerships among college disciplines, with other institutions of higher education, with high schools, with the community, and with private industry. The campus should offer competency-based curriculum that allows students to meet their career goals.

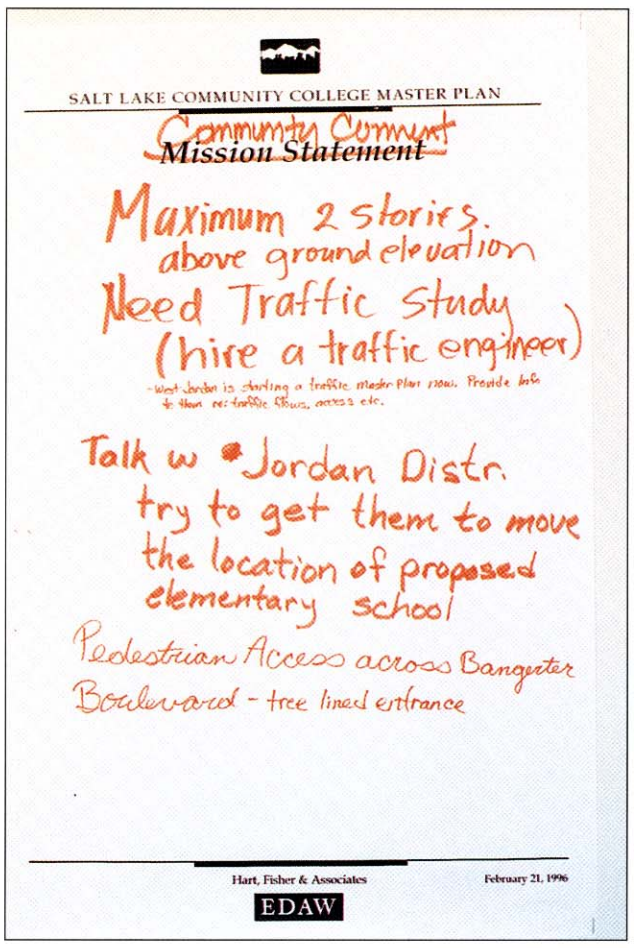
Technology Enhancement and Innovation: The 90th South campus will be designed to promote learning for the future and to foster innovation in education. It must have the capacity to support technologically based programs, distance learning, and other nontraditional teaching methods in conjunction with facilities that can accommodate traditional learning methods. Every classroom, lab, educational space, and faculty office should have access to the full range of current and future technological resources, including the library, Internet, campus networks, and the capability to broadcast to and receive from off-campus sites (with a band width sufficient to allow transmission of full-motion video). The campus should include a technology learning center that allows students to use individualized technology programs. To increase the usefulness of technological resources, faculty will be trained to use them effectively. To support these goals, both physical and educational flexibility will be essential, since growth and change in these technologies will be explosive.

Community Role: Serving the community has always been a significant part of Salt Lake Community College's mandate, and the college anticipates continuing that service on the 90th South campus by addressing community needs, providing opportunities for life-long learning, providing space for public services and events, and acting as a magnet for those who work at home, the elderly, distance learners, those training for and changing jobs, and others within the community.

Site Planning: Site development should be planned in harmony with the environment, taking advantage of the existing grade change and dramatic mountain view, considering the use of passive (not active) solar systems, supporting transit alternatives, and avoiding the overuse of water-intensive bluegrass landscape. The entire campus must be fully ADA-compliant and accessible to emergency vehicles. It should have a pedestrian center. For increased efficiency and flexibility, the campus should have a central utility system. The campus should be planned for ease of maintenance, and the site design should avoid tight dead-ends that make it difficult to remove and stockpile snow efficiently.

Facilities Planning: Those interviewed agreed that facilities should include a student center that serves as the campus "living room" (with a full array of services including food service, a student store, and counseling), a library / computer center, a cultural facility (e.g. a theater or gym), and indoor and outdoor recreation facilities (including baseball and soccer fields). The campus may take the form of a mall. The masterplan should clearly define a phasing approach and identify components that may be developed in phases over twenty years to meet the needs projected for the year 2015.

Pitfalls to Avoid: This campus should not be planned to replicate any existing community college. It should not provide student housing, high-cost limited-enrollment programs available elsewhere, or any facilities that are not functionally adaptable and flexible to meet future needs. Mindful of its role as a community center, the campus should not be a detriment to the local community by damaging the neighborhood, creating undesirable traffic patterns and relationships, locating buildings on busy streets, or exacerbating conflicts among service vehicles, commuters, and pedestrians. Architectural design should avoid materials and elements that create an uninviting character, short spans and load-bearing walls that limit flexibility, and elements that require constant renovation either because of poor performance or because planning fails to anticipate actual needs. Widely dispersed buildings that create excessive travel distances and spaces that generate long student lines should be avoided. The design should not include any elements that tend to separate programs in applied technology, science, technologies, and the humanities or create a hierarchy among them.



DOCUMENTING COMMUNITY VISIONS AND CONCERNS FOR THE 90TH SOUTH CAMPUS

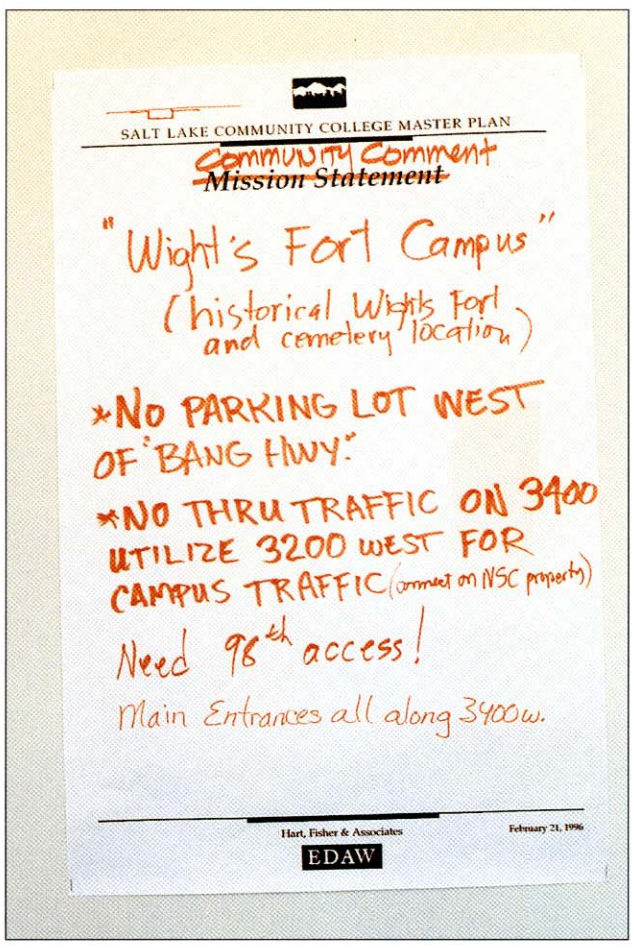
The communities of West Jordan and South Jordan share jurisdiction over the proposed campus site, and they worked together to prepare the 1992 proposal that led to the selection of the 90th South site for the new campus. To ensure continued community participation in the planning process, the college steering committee identified key city agencies and others with an interest in the community, who were interviewed by programming consultant Laura Bayer during the information-gathering phase of the masterplan. Barry Smith of Hart Fisher Smith & Associates and Gordon Storrs, college planner and co-chair of the steering committee, also participated in some of the community meetings. Invitations were extended to city representatives and residents to participate in the planning process by attending city council sessions and masterplanning workshops.

The material that follows in this section has been summarized from a series of interviews and community meetings recorded by programming consultant Laura Bayer between 9 February and 20 February 1996.

COMMUNITY COMPOSITION

South Jordan: The city of South Jordan, which extends south from the proposed site, is a family-oriented residential community that still retains much of its original rural character. Its population is more affluent and more highly educated than the average, and it has the highest number of children per household of any city in the valley. Development consists primarily of single-family residential units, typically large upper-middle-class homes on detached sites, most constructed within the last six years. Some limited multifamily housing, currently being developed adjacent to the freeway, targets a similar income group. The city has been virtually crime-free and has made a commitment to remain that way. Recognizing the need to maintain a tax base to support community services, South Jordan has hired a director of economic development and is seeking commercial enterprises that can harmonize with its character, but it would prefer to minimize the amount and impact of development within its boundaries.

West Jordan: The city of West Jordan, extending north from the proposed site, also has a residential focus, shares its neighbor's concerns with family values and well-being and has experienced rapid growth in recent years. West Jordan, however, has a longer-standing economic development program and is host to a significant number of commercial, retail, and public facilities, including the National Semiconductor plant across from the campus site on 3400 West and the Jordan Valley Hospital located just across 90th South from the site. Considerable commercial development has occurred along 90th South, including offices, retail facilities, small manufacturing, warehouse facilities, and service stations and convenience stores. City planners have focused their efforts on planning land use, developing consistent design standards for city facilities, and attracting development that will be compatible with the neighborhood character.



Other Participants: A variety of individuals in addition to those at the college and in the community were also identified as having an interest in the proposed campus. Among them were residents of adjacent communities such as Draper, Kearns, West Valley City, Midvale, Sandy, and Riverton; and representatives from the Governor's office, the office of the State Fiscal Analyst, the State Higher Education Planning Committee for the south valley area, the Board of Regents, the office of the Commission for Higher Education, the Utah Transit Authority, the Utah Department of Transportation, Utah Power & Light, US West, and the University of Utah and other state institutions of higher education. These groups were also invited to participate in the workshop process, and key individuals were interviewed by David Hart and Barry Smith of Hart Fisher Smith & Associates, Laura Bayer, and Ira Fink, Ph.D., of Ira Fink & Associates.

COMMUNITY VISIONS AND CONCERNS

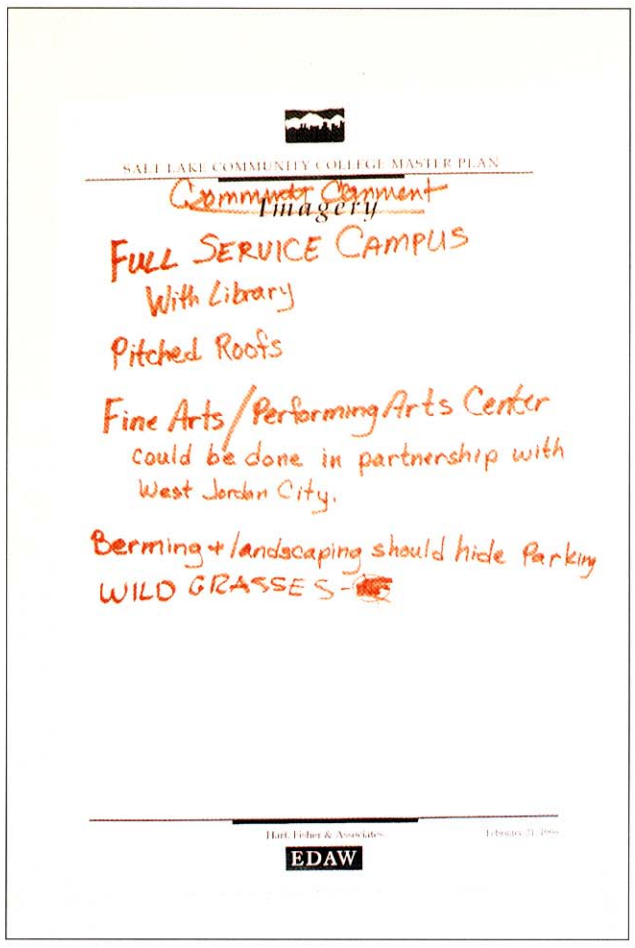
Role of SLCC Campus: Community residents see the College as a potential neighbor, one that they hope will respect their values and enhance the quality of their communities. They look forward to having the services and resources of a traditional campus available in their neighborhood. Most consider the development of some auxiliary services an essential element of the campus. They anticipate having such

facilities and services as recreational facilities, auditorium/theater facilities, gallery/museum/exhibit facilities, library facilities, public-access computer centers, and media / conference center facilities. They envision the college campus as a focal point, meeting place, and community center that can host as well as provide community programming. Other traditional campus services (housing, food-service, bookstore, student union, and student activities) are of comparatively less interest to the local community. These services, most feel, can be provided by the private sector or would not be extensively used by community residents.

College Programs at 90th South: The community has a high level of interest in a broad range of educational offerings, including vocational, technical, undergraduate, and baccalaureate programs, workshops, training sessions, seminars, computer education, community and continuing education, professional certification programs, and "visionary" educational possibilities that extend beyond existing modes. Most anticipate comparatively less demand for graduate and research programs in the community, although some indicated that their populations have relatively high educational levels and might find it desirable to have convenient access to at least some graduate-level course offerings.

Location, Traffic, and Access: Concerns related to the impact of the potential campus on neighborhood traffic and access have overwhelmingly the highest priority for community residents. They worry that college-related traffic will disrupt quiet residential neighborhoods, threaten the safety of their children, and destroy the character of the area where they have chosen to make their homes. Neighborhood residents want the new Bangerter Highway to carry as much as possible of the campus traffic, with easy ingress and egress to campus so that a minimum of traffic will be diverted to neighborhood streets like 3400 West. Many would like to limit access from 90th and 98th South because they believe that traffic on these streets is already too high and that additional student traffic would inevitably spill into the neighborhood. Virtually all support the development of light rail and mass transit, although some point out that unless mass transit is carefully planned it will not be used by students and others in the community, since projected travel times and access provisions are not competitive with the private automobile. Providing safe crosswalks, creating a pedestrian overpass at the Bangerter Highway, and routing traffic away from existing and planned elementary and junior high schools are matters of great concern to residents.

Impact on City Services: Citizens express some concern about the potential impact of the college campus on city services, including demands for fire protection, police and emergency services for college events, and the potential for increased crime. Others discussed the possibility that college-sponsored events that might generate disruptive noise levels (e.g. rock concerts and some sports events). Most, however, believe that these concerns can be resolved through careful planning and service agreements, and that the presence of students will not result in an increase in crime. Some, however, expressed a desire to provide a self-contained experience on the campus so that students would not have reason to wander into the community. Several considered the potential impact of the campus on economic development (either as a positive factor that would encourage companies to locate in the area or as a potentially negative factor that might draw undesirable development). Others pointed out that the development of college plans offered an opportunity to coordinate adjacent land-use planning so that the neighborhoods retained their desirable characteristics through planned growth.



Community Design Issues: Community residents expressed a strong desire for architectural design guidelines that would assure coherent development of a campus that is architecturally compatible with the neighborhoods, responds to the area's traditional character, restricts buildings to a height compatible with neighborhood scale, and employs a consistent palette of materials that will complement the neighborhood. They hope that the campus will be of a high quality, with durable construction and timeless design. They would object to a campus with a "high-tech" appearance, a high-rise profile, or an uncoordinated mixture of styles and materials. Generally they express positive feelings about materials such as wood, brick, and stone; but are less favorably inclined toward steel and glass structures, concrete, and other materials that suggest an industrial or institutional context. They want campus construction and expansion to be orderly and well planned. They also emphasize the importance of developing landscape and pedestrian access and use areas. Many are interested in xeriscape, native or climate-tolerant plantings, and other environmentally sensitive approaches. They would like to see a design that encourages pedestrian travel, bike access, and the use of mass transit as part of an overall plan to reduce vehicular traffic and minimize the impact of parking areas on

the neighborhood. Most dislike surface parking, but believe that a parking structure would be out of character or prohibitively expensive for this campus.

Campus Name: Many community members expressed the hope that the campus would have a name other than "90th South." Some expressed preferences for a name that would make reference to a local historic feature, such as Wight's Fort or Welby Junction, or a geological feature such as the Oquirrh Mountains or the Jordan River.

OTHERS' VISIONS AND CONCERNS

Higher Education Mandate: The role of higher education is to provide learning experiences for the largest possible number and type of students, within the constraints of a limited budget. Given these conditions, spending should focus on instructional priorities.

Level of Policy Determination: Planning for new educational sites needs to be coordinated at the Regents' level and should be consonant with state goals.

Duplication of Facilities and Programs: The goal of state higher education is the creation of a system that meets student needs efficiently, without unnecessary redundancies. Any proposal to create resources similar to those now in place -- and particularly those costly resources such as traditional libraries, theaters, recreational facilities, vocational programs with extensive equipment and infrastructure needs, and auditoria -- should be carefully reviewed to determine that the needs cannot be met through the use of existing facilities.

Campus Experience: Some of those interviewed suggested that, as the demographics of the student population change, fewer higher education students will need or desire the traditional campus experience, with its emphasis on housing and activities. An increasing proportion of Utah's higher education population consists of older individuals seeking lifelong learning, retraining, and continuing education. These individuals can best be served by a comparatively large number of smaller dispersed learning sites, rather than large central traditional campuses. Entry-level students who need and want a campus experience can be served at existing traditional campuses. Graduate-level students who require research-intensive programs can also best be served at existing research-oriented institutions.

Role of Technology in Future Education: Technology will be a critical component of all future higher education programs and policies. All campuses should provide resources to support distance learning, technology-enhanced course offerings, individual-directed study, instruction on demand, and other offerings that depend on or make use of electronic and media technology. Wherever possible, these resources should be used to provide instruction to larger numbers of students at a lower cost, reduce the need for educational construction, provide broader access to information, and offer students more learning options.

Cooperative Ventures: The state's institutions of higher education should explore cooperative ventures to avoid unnecessary duplication of services and resources. Successful attempts at co-location nationwide suggest that cooperative ventures are most successful where institutional responsibilities and boundaries are clearly delineated and non-overlapping. Most of those interviewed considered potential cooperation with the University of Utah the most promising partnership for the new SLCC campus. They envision an arrangement in which SLCC would provide undergraduate and technical education, while leasing space to the University for baccalaureate programs and perhaps some limited graduate level course work. Some also mentioned potential cooperative ventures with other institutions, including Weber State and Utah State universities.

POTENTIAL PARTNERSHIPS IN CAMPUS DEVELOPMENT

A wide variety of community and other entities with a potential interest in partnership opportunities with the college have been identified. These cooperative ventures might include joint development of trade-specific courses, coordination of resources, co-location, use of off-campus sites for instructional programs, private development of support services for students (such as housing and food service), and development of central recreational and cultural resources that could be used by both the college and the community. The following represents a preliminary list of potential partners:

Information Technology Businesses (Micron, National Semiconductor)
Mining Technology Businesses (Kennecott)
Manufacturers (Interstate Brick, Dannon Yogurt, Malt O Meal)
Jordan Valley Hospital
School Districts
West Jordan City (including planned athletic fields, soccer complex, recreation center, and rodeo arena)
Hospitality and Residential Services (hotels, motels, conference centers, and possibly off-campus residential units designed for students)
Construction and Skilled Trades (steel fabrication, cabinet shops, developers)
Biomedical Industries (Merritt Medical, Ultradent, Ballard Medical, Becton-Dickenson, Sorenson)
Flight Training, Army National Guard
Service Organizations (The Business Alliance, Chambers of Commerce, Utah Information Technologies)
Small Business / Entrepreneurship Programs (South Valley Small Business Development)
Retail (South Towne Mall, Smiths Food King)
Higher Education (University of Utah, Weber State University, Utah State University)
Secondary Education (concurrent enrollment)

BACKGROUND AND INITIAL ASSUMPTIONS:
DFCM

Material summarized below from a checklist provided by Ben Hutchinson, Salt Lake Community College Project Architect for the Utah State Division of Facilities Construction and Management.

In the initial stages of this planning process, DFCM outlined a series of guidelines for the workshops and identified a series of checklist items to be addressed. Like other interested parties, DFCM personnel were invited and encouraged to participate throughout the workshop sessions.

CHALLENGE-SEEKING GUIDELINES

- **Do not assume anything.**
- **Challenge every option.**
- **Focus on principal, not detail.**
- **Follow a participatory process.**

ISSUES TO CONSIDER IN MASTERPLANNING

- ☐ Areas of Focus
- ☐ Institutional Direction for Next 20 Years
- ☐ Significant Relationships
- ☐ Academic Master Plan
- ☐ Components
- ☐ Communications Technologies
- ☐ Enrollment Policy
- ☐ Demographics
- ☐ Site Issues
- ☐ Transportation Studies & Plans
- ☐ Campus Plan
- ☐ Architectural Style and Materials
- ☐ Environmental Approaches
- ☐ Views Inward or Outward
- ☐ Circulation
- ☐ Landscape Design
- ☐ Parking
- ☐ Utility Systems

SPACE ALLOCATION STANDARDS FOR SLCC

The following projections have been developed from materials generated by Ira Fink, Ph.D., of Ira Fink & Associates, using data provided by Gordon Storrs and the State of Utah Higher Education Space Standards and Utilization Study *prepared by Paulien & Associates, 1996, pp. 37-48.*

Recent studies have identified overall square footage use and requirements for the state's colleges and universities. The charts on the following pages apply those standards to the development of the 90th South Campus. **Chart 1** summarizes the total current instructional and support space available at Salt Lake Community College and the needs projected for the year 2004.

1. SPACE ALLOCATIONS FOR SLCC (ALL CAMPUSES) IN 1994 AND 2004

These projections are based on enrollment of 12,478 in 1994 and 15,967 in Fall 2004.

*(Based on Paulien Report figures. * Projections used here exclude 15,867 sf of Research Lab area projected by Paulien & Associates for 2004; the College does not anticipate a need for research labs.)*

Category	Space Type	ASF Existing Fall 1994	Percent	ASF Fall 2004	Percent
100	Classroom	100,342	15%	167,781	16%
200	Class Labs	264,199	39%	330,237	31%
250	Research Labs	0	0%	0*	0%
300	Office & Conference	104,763	15%	155,018	15%
400	Study / Library	11,242	2%	56,242	5%
500	Special Use	0	0%	50,528	5%
520	Physical Education	34,599	5%	110,289	10%
600	General Use	47,380	7%	47,380	4%
700	Support	113,564	17%	147,284	14%
TOTALS		**676,089**	**100%**	**1,064,759**	**100%**

The space allocation studies proposed a series of statewide standards for the development and assignment of space at campuses of various types. These figures are based on student enrollment and the numbers of faculty and staff. **Chart 2** lists the state space-planning standards relevant to the Salt Lake Community College campus.

2. STATE SPACE STANDARDS AND FACTORS FOR SLCC

(Based on Paulien Report, report of Ira Fink, Ph.D., and existing Redwood Campus parking rates.)

Category	Space Type	ASF per FTE Student	ASF per FTE Faculty	A Parking / Redwood Head Count	B Parking per FT & PT Student / FTE Faculty or Staff		
					FT	PT	FTE
100	Classroom	9					
200	Class Labs	25					
250	Research Labs	0					
300	Office & Conference		150				
400	Study/Library	5					
500	Special Use	4					
520	Physical Education	6					
600	General Use	6					
700	Support	8					
Parking	Parking			0.32	0.8	0.4	0.8
TOTALS		**63**	**150**	**0.32**	**0.8**	**0.4**	**0.8**

Chart 3 identifies how these standards would be applied to the new SLCC campus at various enrollment levels. It is based on the following assumptions:

- For each FTE (full-time equivalent) student, there will be 1.5625 head-count students.
- The number of full-time students will equal 39% of the number of head-count students.
- The number of part-time students will equal 61% of the number of head-count students.
- There will be one FTE faculty/staff person for every 8 FTE students.
- Assignable square footage (ASF) figures will be generated by multiplying the total number of FTE students and faculty/staff by the factors listed in Chart 2.
- The ratio of assignable square footage to gross square footage (ASF/GSF) will be 60%.
- The number of parking spaces required will be proportional to enrollment levels. This chart assumes a factor equivalent to the current ratio at the Redwood Campus (3,800 parking stalls for 12,000 head-count students, or 0.32 parking stalls per head-count student), which is more efficient than planning standards defined by Ira Fink, Ph.D. (0.8 parking stalls for each full-time head-count student and each FTE faculty or staff member, plus 0.4 parking stalls for each part-time head-count student).

3. 90TH SOUTH CAMPUS SPACE REQUIREMENTS FOR VARIOUS ENROLLMENTS

(Based on standards above.)

FTE STUDENTS	**500**	**1,000**	**5,000**	**8,000**	**10,000**
HEAD-COUNT STUDENTS	781	1,563	7,813	12,500	15,625
FULL-TIME STUDENTS	305	609	3,047	4,875	6,094
PART-TIME STUDENTS	477	953	4,766	7,625	9,531
FTE FACULTY & STAFF	63	125	625	1,000	1,250
BUILDING ASF	**40,875**	**81,750**	**408,750**	**654,000**	**817,500**
BUILDING GSF AT 60% EFFICIENCY	**68,125**	**136,250**	**681,250**	**1,090,000**	**1,362,500**
PARKING AT RATE A (CURRENT REDWOOD)	**247**	**495**	**2,474**	**3,958**	**4,948**

Chart 4 shows a hypothetical allocation of the total space needs identified in Chart 3 for a student enrollment of 1,000.

4. DISTRIBUTION OF PROJECTED BUILDING AREA BY SPACE TYPE FOR 1,000 FTE STUDENTS

(Based on Paulien Report standards.)

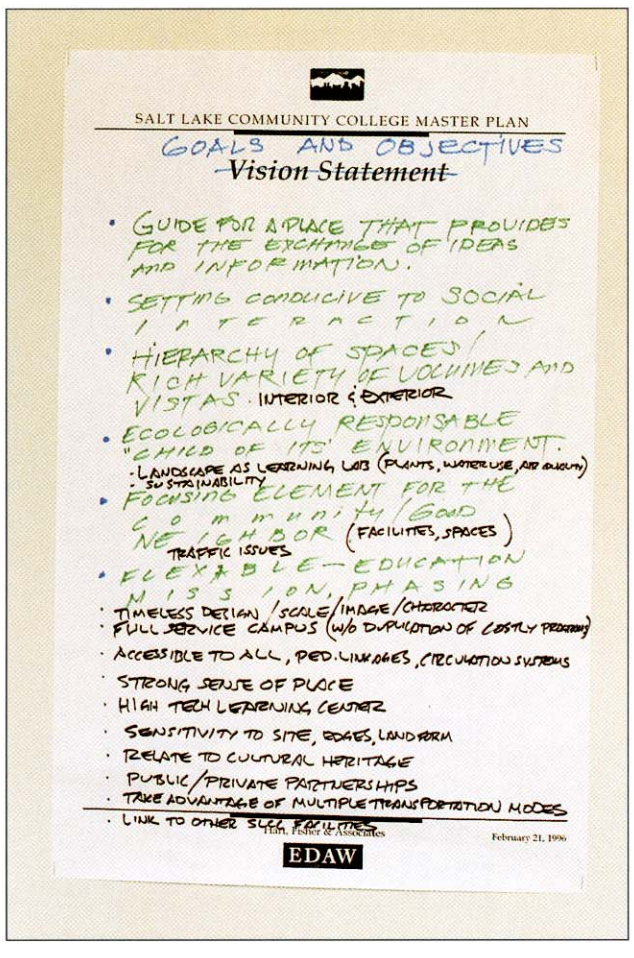
CATEGORY	SPACE TYPE	ASF PER FTE STUDENT	NUMBER OF STUDENTS	SUBTOTAL ASF	ASF PER FTE FACULTY/ STAFF	NUMBER OF FACULTY/ STAFF	SUB TOTAL ASF	TOTAL ASF	%
100	Classroom	9	1,000	9,000			0	9,000	11%
200	Class Labs	25	1,000	25,000			0	25,000	31%
250	Research Labs	0	1,000	0			0	0	0%
300	Office & Conference	0	1,000	0	150	125	18,750	18,750	23%
400	Study/ Library	5	1,000	5,000			0	5,000	6%
500	Special Use	4	1,000	4,000			0	4,000	5%
520	Physical Education	6	1,000	6,000			0	6,000	7%
600	General Use	6	1,000	6,000			0	6,000	7%
700	Support	8	1,000	8,000			0	8,000	10%
TOTAL		**63**	**1,000**	**63,000**	**150**		**18,750**	**81,750**	**100%**

DEFINITION OF MISSION, VISIONS, AND GOALS & OBJECTIVES

After a summary of previous planning efforts and preliminary information (see Part 1, above), the workshop sessions on the first day began with a discussion of expectations, assumptions, and objectives to guide all participants in reaching a collective vision.

Initial Session: The Wall of Wishes for the Campus of Today and Tomorrow

- Existing SLCC facilities are at capacity now, and future needs cannot be accommodated by expanding existing sites. Therefore the development of a new campus is necessary and desirable. Given growth patterns and projections, it is assumed that this campus will eventually be developed as a full-service campus, but one that relies on learning technologies and does not duplicate costly resources available elsewhere.
- In addition to growth projected by demographic research, a new campus will generate its own growth patterns. Based on patterns at the Redwood Road campus, college planners assume that a new site at 90th South would generate enrollment growth of at least 1,000 students per year in its initial years. This growth may be accompanied by some temporary reduction in demand at the Redwood Road campus, which currently serves students from the south part of the valley.
- This campus should be a true partnership with the community. Local residents emphasize the importance of citizen access to campus resources and participation in campus programs. The community envisions the campus as a town center, cultural center, and civic park, as well as a source of instructional services.
- The new campus should allow the college to explore new opportunities, meet staff needs, be planned for future expansion, and provide flexibility and phasing options to accommodate future growth and change at whatever pace that growth occurs.
- The campus will be a state facility that works in partnership with other SLCC sites, the communities, private industry, and other institutions of higher education to make the best use of available resources. It will be an innovative facility that may serve as an "incubator" for new programs.
- The technology of the present and the future will be important aspects of the 90th South campus, which will offer distance learning and other technologically enhanced learning experiences.
- The campus should be designed to meet the needs of the "student of tomorrow." Changing demographics may dictate a need for new services, such as day care; attention to accessibility for an aging population; and consideration of multiple transportation options.



Vision Statement

The 90th South Campus should be a place that provides for the exchange of ideas and information in a graceful setting conducive to social interaction, which is an essential part of education. The design should provide a hierarchy of spaces that reward the visitor with a rich variety of volumes and vistas. The campus should be a child of its environment, be ecologically responsible, and present a benevolent face to the surrounding communities, for which it will become a focusing element. And finally the plan should create a flexible system that can adapt to ever-changing curricula and technologies and can grow in small or large increments to meet the needs of the future.

Campus Character

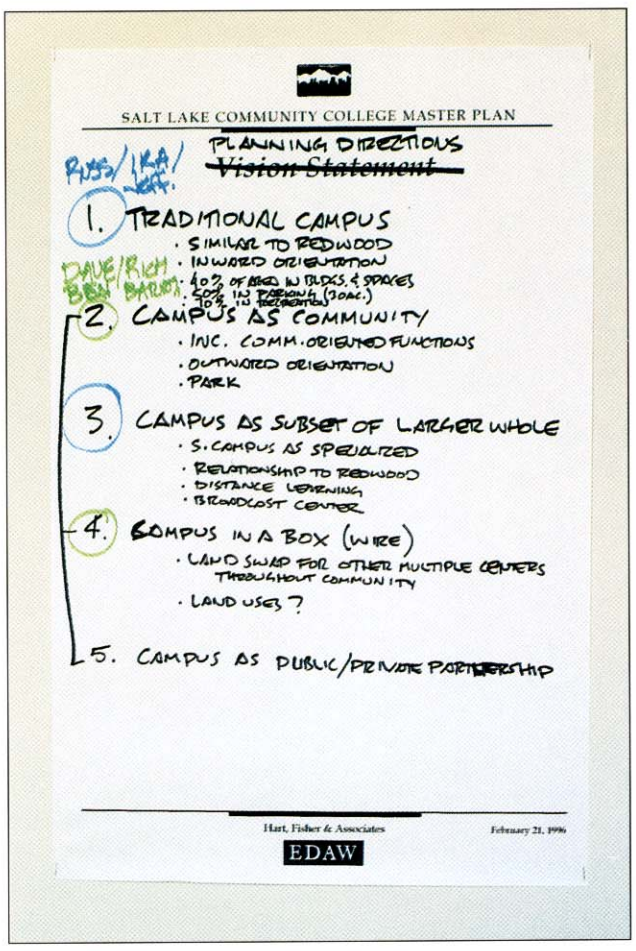
- Buildings should maintain the neighborhood scale, harmonize with traditional styles and materials, and reflect the area's history and cultural heritage. Recognizing the long life expectancy of campus buildings, the design should be timeless.
- The plan should respect the existing natural features, take the prevailing south wind into consideration, and make use of the site's assets. Planners should explore solar features, earth sheltered construction, the potential re-use of grey water for irrigation, a blend of native and traditional plantings that reduces water consumption, and the possibility of retaining the historic agricultural use of the land in some parts of the site. The site should have a canopy of trees.

- Pedestrian linkages (indoor and outdoor) should be an important element. All parts of the campus must be accessible to all.
- The landscape should provide opportunities for learning experiences, including laboratory areas and outdoor classrooms.

During the afternoon session on the first day, participants held a brainstorming session to suggest the types of campus that would meet the concerns identified in the initial review. The following five campus types were selected for further exploration.

Campus Types to Be Considered in the Workshop

- **NEW TRADITIONAL CAMPUS**: This would be a full-service campus similar to the Redwood Road campus, with approximately 40% of the site devoted to buildings, 50% allocated for parking, and 10% available for outdoor recreation. Its orientation would be primarily inward.
- **CAMPUS AS COMMUNITY:** This would be a full-service campus with an emphasis on community-oriented functions and facilities integrated with the surrounding neighborhoods. Its orientation would be primarily outward.
- **CAMPUS AS A SUBSET:** This would be a specialized campus designed to consolidate one or two types of services for the entire SLCC system. It might, for example, have a broadcast center as its primary facility and be designed as the center of distance learning programs.
- **CAMPUS IN A BOX / CAMPUS IN A WIRE:** This campus would consist of a single technology-enhanced instructional facility at the 90th South site. Under this scenario, the college would retain a portion of the site for expansion, sell or exchange the remainder of the land, and create multiple "Campus in a Box" centers throughout the south part of the valley.
- **CAMPUS AS PUBLIC - PRIVATE PARTNERSHIP**: Participants concluded that what would make this campus concept distinctive is not its design form, but the organizational and funding structures that might be developed to implement it. Since it could take on any of the physical forms generated by the other four options, it should be considered as a possibility in the development of all the scenarios.



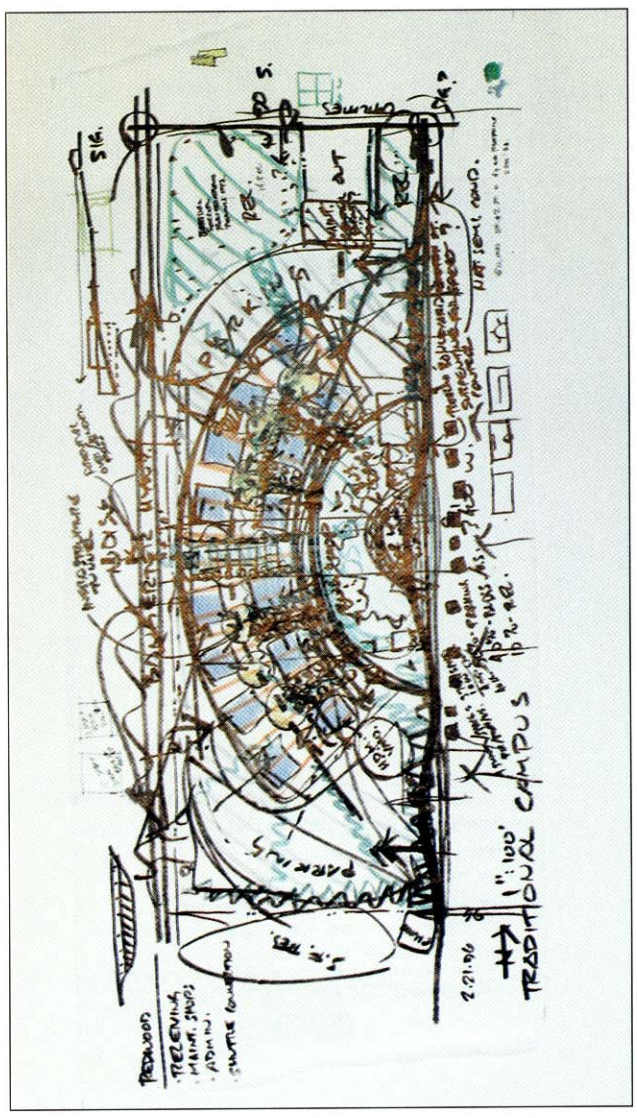
CONCEPTS DEVELOPED IN THE FIRST SESSION

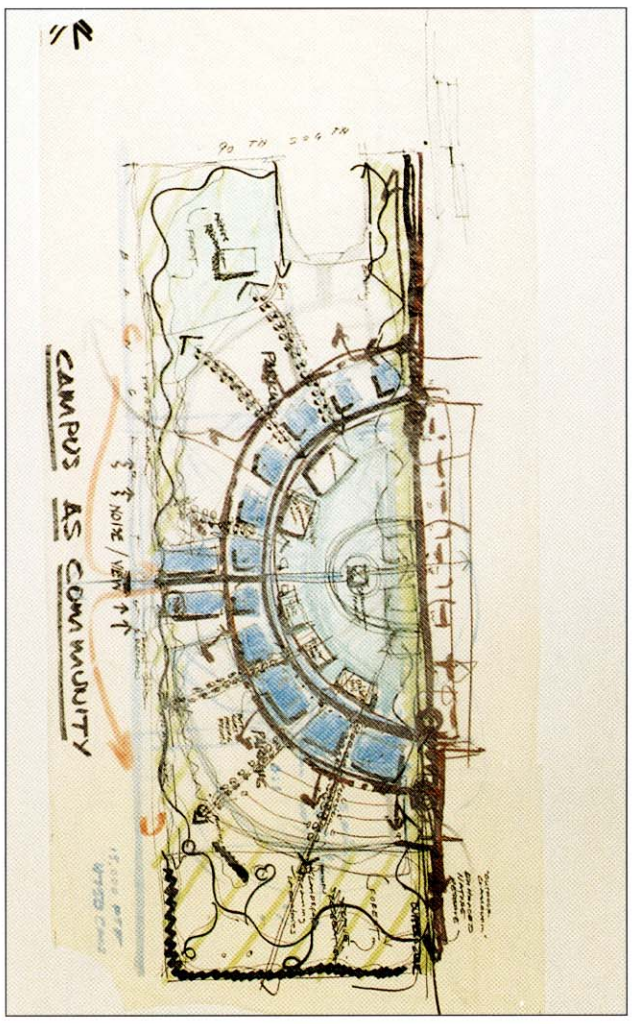
Participants divided into two working groups to explore the five proposed concepts. One group was to focus on the traditional campus and possible subsets and public-private partnerships, while the second studied the "Campus as Community" and "Campus in a Box."

"TRADITIONAL CAMPUS"/ "CAMPUS AS SUBSET": One group explored a series of possible arrangements, including a semi-circular plan, a campus surrounded by a ring road, a modular campus arranged with "plug-in" buildings along a central utility spine, a mall-type campus, and a campus arranged on an arc that roughly followed the site topography. The scheme that this group presented at the end of the first day was a semicircular plan with access roads and parking at the periphery, employing formal quads and regular geometry to create the patterns of a traditional campus.

"**CAMPUS AS COMMUNITY":** The second group focused on a semi-circular plan with buildings arranged in two arcs following the general site contours. The scheme featured a central outdoor pedestrian mall. Building types that would have the highest level of public activity and community interest (such as a theater/auditorium, arts facilities, and student services) were placed on the inner semicircle to emphasize their connection to the community. Instructional and administrative facilities with a more internal focus were located on the outer arc, more distant from residential areas.

"CAMPUS IN A BOX" One "Campus in a Box" scheme assumed that the "box" would be the first-phase development of a semi-circular scheme, located at the center of the site on the west side. The second scheme placed the "box" on approximately thirty acres at the north end of the site and suggested that the remaining land might be developed as a "farm of the future" that could be operated as an extension program, with the land rented or sold to provide income for the college.





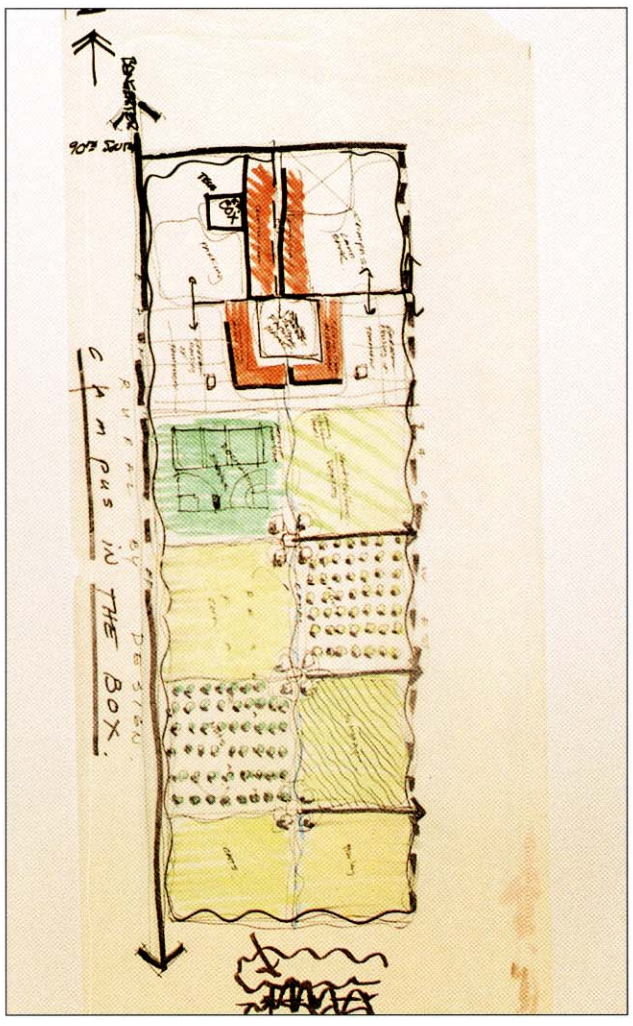
REVIEW OF FIRST-SESSION CONCEPT PLANS

Through the evening of the first day and the morning of the second, participants reviewed these scenarios in detail and identified the directions to be pursued and the problems that would have to be addressed to develop the plans successfully.

Traffic Concerns: Residents expressed concern about traffic and parking problems that might be generated by these schemes. The primary concern was the volume of traffic along 3400 West, particularly in light of the location of existing and planned elementary and junior high schools and an existing church adjacent to the site. Neighbors also expressed fears that these schemes would encourage students to park in their subdivisions rather than in designated campus parking areas. Elements that seemed likely to draw students into residential areas included a major entry and bus turnaround shown on the east side of the "Traditional Campus," the concentration of high-use facilities on the inner arc of the "Campus as Community," and the locations of east-side entries. Possibilities such as creating a tree-lined boulevard, designing access roads to slow traffic, and posting and enforcing parking restrictions in residential areas did not satisfy these concerns. Participants recommended a traffic study, and the city of West Jordan, which has begun a traffic master plan, requested additional information about the proposed traffic impacts. Neighbors also suggested that planners talk with Jordan School District to see if the elementary school proposed for a site immediately south of the campus could be relocated.

Bangerter Access: Various options were suggested for ingress and egress from the Bangerter Highway, including a fly-over with below-grade access to allow southbound egress traffic to leave the site directly (without traveling to 90th or 98th South), multiple entry points, and the location of additional parking and perhaps other facilities on the west side of Bangerter with a pedestrian overpass.

Outdoor Recreation: Residents liked the availability of outdoor recreation facilities for team sports, but questioned the impact of these activities on adjacent homes. They recommended that developed facilities -- particularly those like the baseball field that will have lights for evening use and those that could draw large crowds for team events -- be confined to the northwest corner of the site to reduce disruption. Neighbors concluded that recreational activities such as walking/jogging/bicycle paths, tennis courts, and non-lighted athletic fields for soccer and multipurpose use would be more compatible with the neighborhood areas to the east and south of the site. Various locations and orientations for these facilities were considered.



Location of Buildings: Neighbors expressed concern that major campus buildings were located too close to 3400 West, and that this would exacerbate traffic problems in the neighborhood. While participants liked the fact that the "Campus as Community" plan showed community-related buildings as an integral part of the campus, they wanted to make sure that the location of those buildings did not compromise neighborhood scale and quality. Alternative building locations and geometries for the "Campus in a Box" agricultural scheme were also proposed. Participants approved of several elements common to all the schemes, including the possibilities for creating the desired hierarchy of spaces, the advantage taken of views to the east and over green spaces, and an orientation that would not preclude passive solar gain.

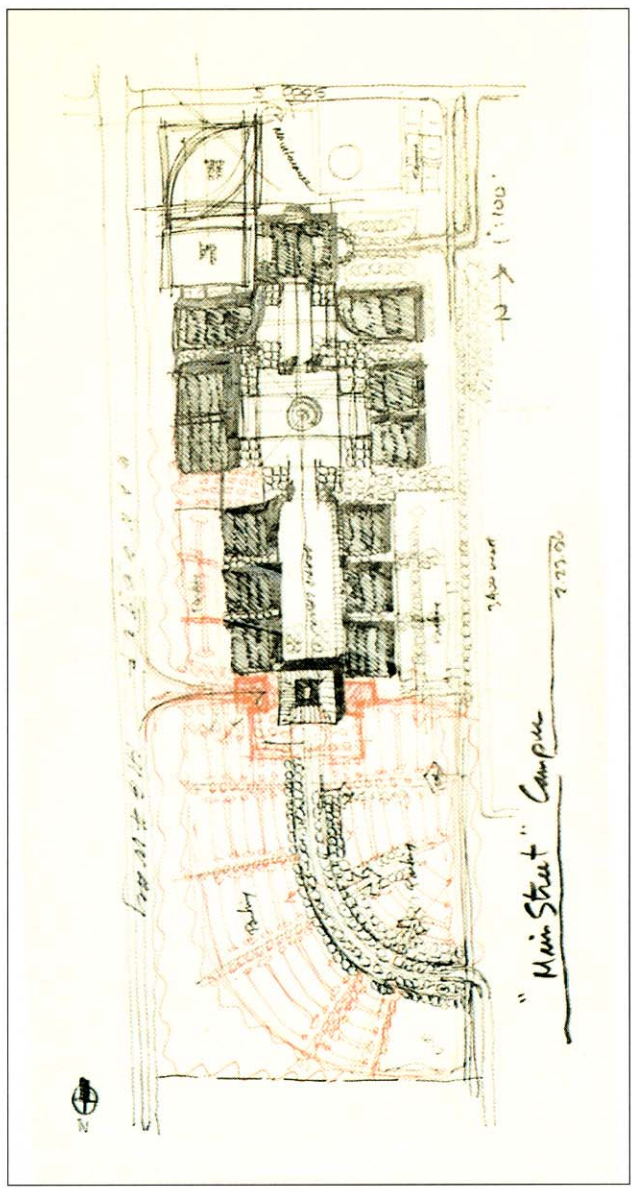
Focus of Campus: There was some discussion of the direction of focus and the extent to which the "Campus as Community" plan oriented outward. Participants also pointed out that the campus focus would change throughout the period of phased development. For the arc-shaped schemes, defining what would be located at the center point was considered crucial, since that element will become the focus and anchor for the campus. Participants also recommended that all schemes consider what would be developed in the initial phase or phases and how much infrastructure would be required to support initial facilities construction.

Faculty Concerns: Faculty reviewers focused primarily on the definition of the campus and the programs and services to be offered there. They wanted to ensure that the campus would offer a full range of programs and services, with adequate support facilities for faculty and staff who provide them. It was suggested that the first building should include a learning center that could accommodate tutorial activities, library facilities, and a disability center in addition to instructional space. To reinforce collegiality and encourage interdisciplinary contact, faculty members suggested using enclosed walkways to link individual buildings and creating indoor and outdoor public spaces for incidental activities. Individuals offered a variety of recommendations about the location and orientation of facilities that would better serve their individual disciplines and programs.

Campus Composition: There was overwhelming support for full-service facilities that would maintain the college's commitment to community involvement within a campus context. Participants suggested that publicly oriented elements, such as a Fine/Performing Arts Center, could be developed in partnership with the community.

Landscape: Participants recommended berming and landscaping to hide parking areas, and some wanted tree-lined boulevards at the entries. There was some disagreement over the desirability of native and drought-tolerant plants, which would conserve water and might reduce maintenance, but could be less aesthetically appealing than a more traditional landscape approach if they were not properly designed.

Directions to Pursue: Participants agreed to pursue two scenarios, the "Traditional Campus" and the "Campus as Community," with the understanding that the "Campus in a Box" concept would be incorporated in the other schemes through the definition of a technology-enhanced multipurpose instructional facility that could be constructed as the first phase of any of the scenarios under consideration. This facility would serve as the centerpiece of the campus and the anchor for any future development.



SECOND-DAY REVIEWS AND RESPONSES

During the second day's sessions, the "Traditional Campus" and the "Campus as Community" were redrawn to suggest various approaches to meet the concerns articulated in initial reviews. After further consultation with UDOT, it was determined that highway codes governing the distances from traffic signals and the distances required for acceleration and deceleration lanes would preclude anything more than one right-on and one right-off access point for the campus, with a possible pedestrian overpass at 98th South. At the end of this day's sessions, participants reviewed two new versions of the scenarios selected for further exploration.

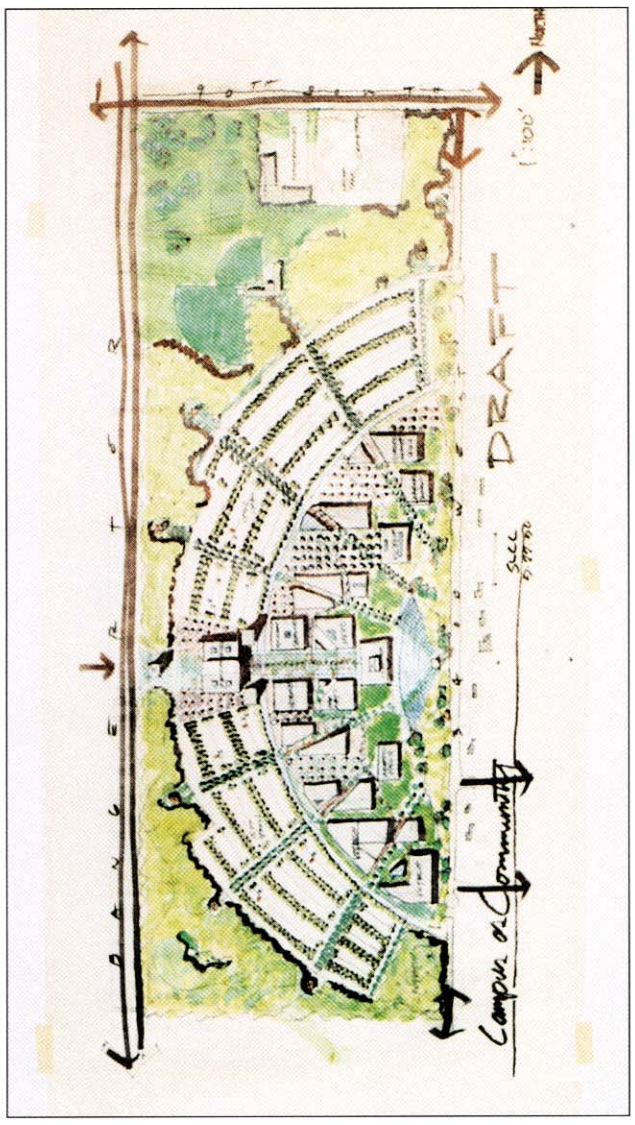
"TRADITIONAL CAMPUS": This plan retained the arc-shaped form and the traditional formal geometry of the original version, with modifications to address concerns about traffic, the location of athletic fields, and the articulation of buildings. As part of the redefinition, planners also began to consider optimum zones for individual instructional functions. The nature of the central multipurpose/technology center was explored, and planners gave more detailed consideration to providing utilities, service, and parking to support the campus.

"CAMPUS AS COMMUNITY": In revising this scenario, designers focused on ways to alleviate concerns about circulation, ingress and egress, traffic flow, and proximity of buildings to the neighborhood. They explored alternate locations for campus entries and expanded the landscape buffer areas to provide additional separation for the adjacent residences, schools, and church. Planners also began to examine the placement and relationships of buildings and the open space between them. One scenario shifted building locations slightly to create a main central quad and a system of subsidiary quads working off of the larger arc. Responding to suggestions that this arrangement was too formal, a second alternative explored the possibility of locating the structures of the inner arc informally within a park-like landscape setting.

By the end of the second day's work, most participants felt that the two schemes had responded to their concerns but not yet resolved the issues to their complete satisfaction. The discussion focused on ways to continue improving these scenarios, areas that required further definition, and a critical review of the ways that college functions could operate in the facilities defined by these plans. Concerns were raised about accessibility and circulation through the campus, delivery of utilities and services, and better resolution of access and parking issues. It was agreed that both scenarios should be developed to the next logical level in the ensuing workshop sessions.

CONCLUDING SCENARIOS, FIRST SESSION

As participants continued to work and review their progress on the final day of the first session, they incorporated several key new ideas that generated significant changes in both schemes.



"TRADITIONAL CAMPUS": Responding to a suggestion made by area residents the previous evening, the design team explored the possibility of closing 3400 West to through traffic in the area adjacent to the campus. After considering several ways to block traffic, designers developed two cul-de-sacs that allowed access roads to enter and exit the campus at the north and south ends on the east side, but blocked all traffic in the central portion of the site opposite the houses that front on 3400 West. Residents determined that it would be possible for neighborhood traffic and emergency vehicles to access their homes from 3200 West. Planners continued to refine the other campus elements to resolve the concerns identified in the reviews.

"CAMPUS AS COMMUNITY" / "HILLSIDE CAMPUS": As participants discussed ways to make this scenario more responsive, a design team member made a suggestion that led to a major evolution in the concept, which was given the new name, "Hillside Campus." In this plan, the major building axis followed site contours exactly, using the existing grade change to tuck structures into the hillside, create a major outdoor pedestrian mall at a single level, and take more advantage of solar orientation. A system of three superimposed grids provided an organizational structure for the plan, with the central building oriented to a north-south orthogonal grid and the remaining structures working off grids oriented to take advantage of solar gain and views. The result was an informal village-like clustering of somewhat smaller structures that created a series of varied outdoor spaces at the heart of the campus. Like the traditional scheme, this plan adopted the proposal to close 3400 West to through traffic. It included a large landscaped area, designed as a "meadow" or "wetland" with native and climate-tolerant plants, that could serve as an outdoor education area as well as a buffer for the campus. It was agreed that this plan incorporated and improved on the desirable features of the previous "Campus as Community" scenario and should replace it.

INTERIM COMMENT PERIOD

The two revised schemes were posted in the College Center at the Salt Lake Community College Redwood Road campus and in the east lobby of the South City Campus for a week to allow faculty, staff, students, and community members to review and comment on the plans. During this interim period, planners also attended neighborhood meetings and continued research on the issues raised in the first sessions.

Faculty and Staff Concerns: Faculty members reiterated the concerns they had previously expressed about the academic program for the campus, the need to provide a full array of services, and ways to take advantage of current and future technological enhancements. Participants also raised concerns about campus security, recommending that landscape designs be reviewed to enhance security, that buildings have electronic systems to provide 24-hour security for users, and that planners take into account the increased risk of theft and damage created by the presence of more computer stations and equipment. They emphasized the importance of having building designs that could provide security without requiring additional staff to monitor equipment and entrances. Faculty participants also made additional suggestions for potential shared use of the facilities. They raised questions about phasing and potential campus expansion. They also urged planners to support alternative transit options and to place bike racks throughout the campus.

Student Concerns: The primary student concerns were the availability of parking, convenience of parking, access, and minimal walking distance to classes and key services. Student participants preferred the "Traditional Campus" plan because they saw it as meeting these concerns more effectively.

Community Concerns: Community members felt that their major concerns about traffic and neighborhood character had been addressed effectively in the "Hillside Campus," and that remaining concerns could be addressed in other ways (e.g. creating crosswalks to neighborhood schools). Neighbors to the west strongly opposed the creation of a vehicular over- or under-pass and the creation of parking lots west of the Bangerter Highway, and they raised questions about the impact of lighting and building height on their views. Neighbors to the east strongly supported closure of 3400 West and initiated contact with city officials to have the closure incorporated in current development. They also explored the possibility of acquiring an additional piece of land to widen access from their subdivisions to 3200 South. They had questions about the proposed landscaping and the development of retention or detention systems. Most supported the concept of using local history as a source for the campus name. Citizens overwhelmingly favored the "Hillside Campus"; more than 50 individuals at a neighborhood meeting voted unanimously for it.

Steering Committee Concerns: In addition to sharing opinions on many of the issues raised by other participants, steering committee members articulated a range of concerns having to do with the buildability of the proposed plans. These included definition of the utility systems, the central plant, utility tunnel, telecommunications systems, maintenance facilities, service and emergency access to all buildings, pedestrian circulation systems, the amount of land allocated to green space, parking lot snow removal and maintenance, parking distribution, bus access, construction phasing, accessibility, and code compliance. It was agreed that all these issues should receive further study.

DIRECTIONS FOR THE SECOND SESSION

At the end of the comment period, the steering committee met to determine the direction for the second workshop session. After reviewing all of the comments, the steering committee voted unanimously to explore only one scheme, the "Hillside Campus," further, and to use the ensuing sessions to define it in greater detail, refine problem areas, and incorporate the desirable features of the "Traditional Campus" scheme into the master plan. The following specific areas were noted.

Parking: The "Hillside Campus" will require additional parking capacity, more convenient access to all buildings, and a reduction of required walking distances. To support mass transit, more convenient drop-off points and bus turnarounds should be incorporated. Parking lots should be configured to allow convenient removal of snow and provide a place to stack snow in peak periods. Layouts for parking at full build-out should be generous enough to accommodate additional parking needs that may be dictated by the development of public and community facilities such as the theater, recreation center, and other areas that will generate event traffic.

Access: Participants should review potential Bangerter Highway access and renew their dialogue with UDOT about the numbers of entries and exits serving the campus and the potential construction of an overpass or underpass to serve departing southbound traffic. Acceptable access for emergency vehicles and service must be provided. Jogging/walking paths, bicycle paths, and bike rack locations should be shown. Mass transit access should be at least as convenient as parking for individual private vehicles, and ideally it would provide an advantage to attract riders to public transit. A loop road should be planned to facilitate internal vehicular circulation.

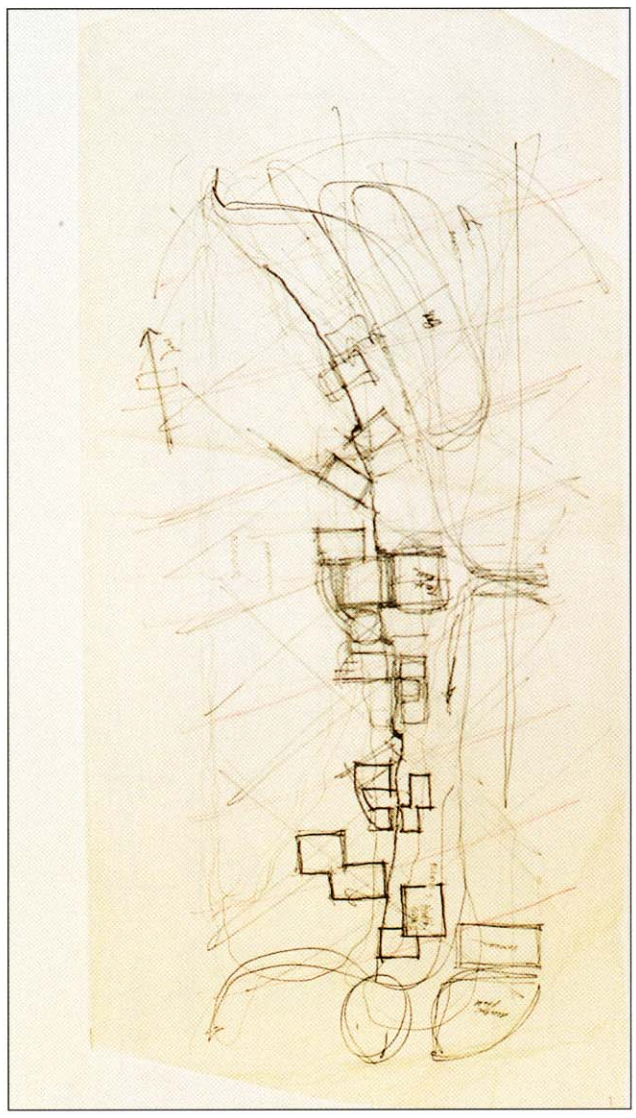
Service: Provision for effective service and emergency access to all buildings needs to be considered in more detail. Service may be provided through the central plaza and/or to the east of the lower building tier by selecting a surface that can withstand vehicular traffic but retain a landscape quality. Planners need to remember that service will require elements that can be unseemly, including dumpsters, loading areas, and service vehicles. Placement of these elements will have to be carefully handled to avoid disruption of the major views to the east. Service areas should be screened with landscape elements. Designers must realize that preserving the landscape integrity and views to the east will be critical to the success of the master plan.

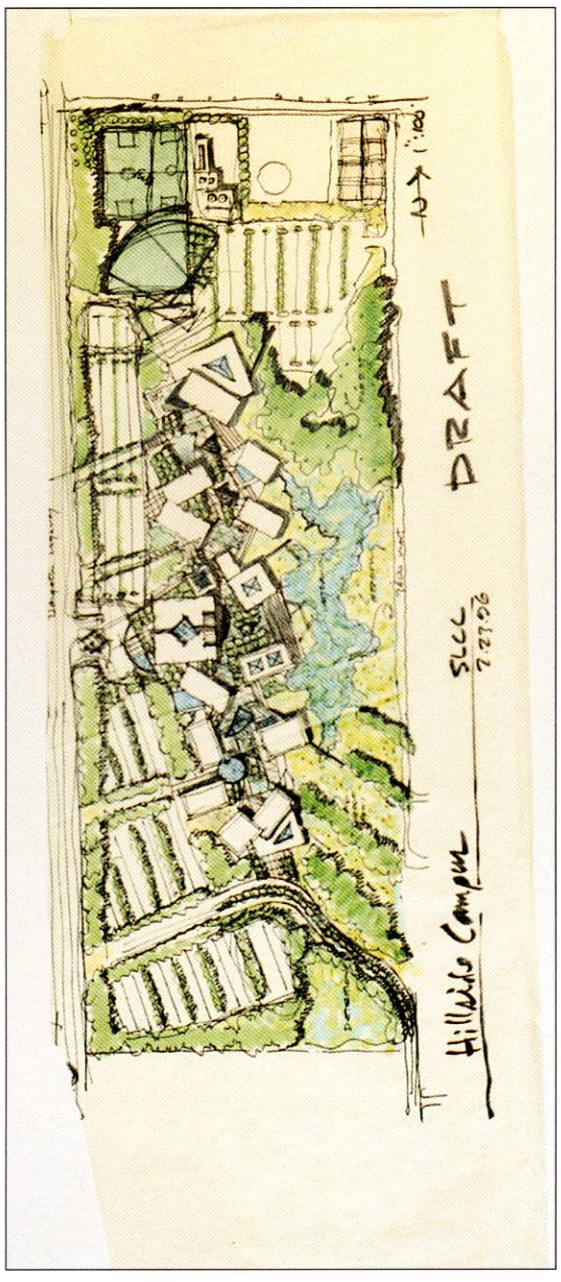
Utilities: Planners should devote more detailed attention to the composition and phasing of central utility systems, the location of the central plant and of subsidiary mechanical service facilities that might serve clusters of two to four buildings, and identification of standards for utility development.

Phasing: To handle campus traffic, it will be essential to develop at least two of the three major access points during the initial construction. The costs of this development must be identified during programming to ensure that funds will be sufficient to provide both the requisite infrastructure and a building that can meet college needs in Phase One.

Building Area and Phasing: The site layout should be revised to show the full 1.3-million-square-foot building area that may be required to meet future demand for instructional facilities. Vocational programs should be located in an area with convenient vehicular access. Consideration should also be given to the potential impact of developing a building at a time over a long phased period, which will affect building relationships, interim circulation patterns, and landscape areas.

Throughout the first day of the second session, the design team revised the master plan concept to address these questions and respond to additional comments from participants.





BUILDING PROFILE AND IMAGE

On the second day of the second session, participants joined in an exercise to initiate discussion of architectural design elements. They reviewed a series of photographs showing potential building sizes, profiles, materials, and images. Individuals were then asked to select the elements they liked and disliked in this collection of images, and to suggest others that might guide designers as they rendered views of a hypothetical campus. They expressed a strong preference for natural materials, clusters of comparatively small buildings, strong linkages between interior and exterior spaces, and the development of a distinctive village character and a strong identity for the campus. Members of the design team reminded them that the elements they liked would be used, not as a pattern to be taken literally in design, but as a starting point to explore design directions.

CONCLUSION OF WORKSHOP SESSIONS

On the third and final evening of the second workshop session, the design team displayed the masterplan concept in a graphic presentation that included a site plan, conceptual sketches and elevations, and collages of desirable images identified by participants. Those who attended gave enthusiastic support to the masterplan that had evolved during the sessions and expressed satisfaction with the ways in which their concerns had been addressed and resolved.

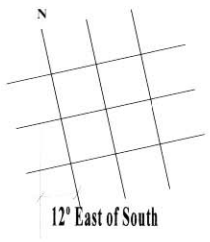
MASTERPLAN APPROACH

The campus will be nestled in the hillside, following the existing site contours and taking advantage of grade changes. At the heart of the campus, a series of outdoor courts will provide pedestrian access at a single grade to link all of the facilities. This will afford convenient access for the elderly and the disabled and create a range of public outdoor spaces that can accommodate diverse events and activities. Enclosed pedestrian links between buildings should be developed to allow pedestrians, the disabled, and the elderly to circulate through the area without being exposed to harsh weather conditions. One-, two-, and three- story facilities will be nestled into the hillside to reduce apparent building height and mass so that the campus will harmonize with neighborhood rhythms and scales.

ORGANIZATIONAL CONCEPT: SUPERIMPOSED GRIDS

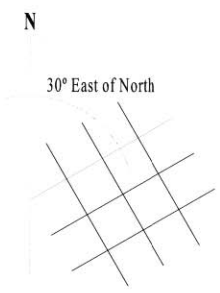
This plan relies on a system of three superimposed grids to generate an organizational structure for the entire campus. The overlapping grids, with a common origin at the central campus building, create a system that will determine the placement of campus elements. Combining three grids in a single system will give designers the flexibility to take advantage of site topography, maximize the benefits of solar orientation, and create an organic distribution of buildings in the apparently informal clustering of a non-orthogonal village. At the same time, this composite system provides the regular, geometric organizational structures required for efficient design layout and construction.

SOLAR GRID



The primary solar grid runs 12½ degrees east of due south to maximize passive solar orientation. Emphasizing the strong relationships between building and site, it will enable designers to created outdoor plazas and activity spaces with a southern exposure for maximum solar gain in winter.

VIEW GRID



The secondary grid is a view grid, oriented 30 degrees east of due north. It establishes a building orientation that will enable each facility to take advantage of the spectacular view of the Wasatch Mountains to the east and panorama views of the entire Wasatch Front.

ORTHOGONAL GRID

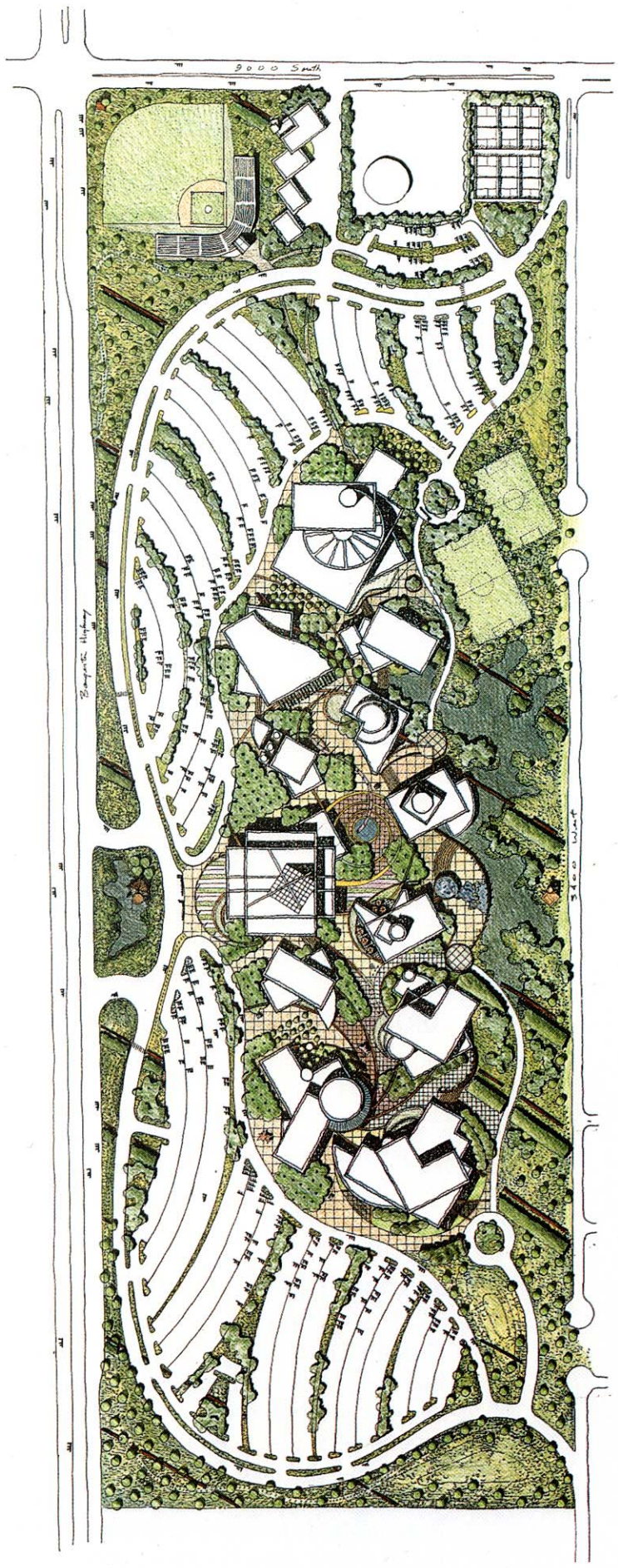
The tertiary grid is the traditional orthogonal grid established by Brigham Young as the organizing principal for the Salt Lake settlement. It has a north-south orientation. This grid links the campus to tradition, cultural heritage, and the organization of the city street grid.

MATERIALS AND FORMS

Conceptual drawings illustrate a series of assumptions made about building scale, material palette, architectural vocabulary, and context that will reinforce this central design concept. Designers should select comparatively small building forms where functionally possible, use articulation to reduce the apparent mass of larger structures, and take advantage of the existing grade changes to minimize apparent building size. Preferred materials include brick, native stone, and wood. Additional materials and elements, including glazing, metals, and concrete, may be incorporated in the overall design scheme provided that they do not detract from the clustered village character of the campus. Applications with an industrial, institutional, or high tech image should be avoided insofar as they would not be congenial with the prevailing design character. Stucco and synthetic stucco should not be used as major materials both because they will be dated as a "vogue" material of the 1980s and because of their poor long-term performance. Materials and forms should be selected with an understanding of the anticipated longevity of the campus: faddish designs and impermanent materials with high life-cycle or maintenance costs should be avoided.

SALT LAKE COMMUNITY COLLEGE MASTER PLAN

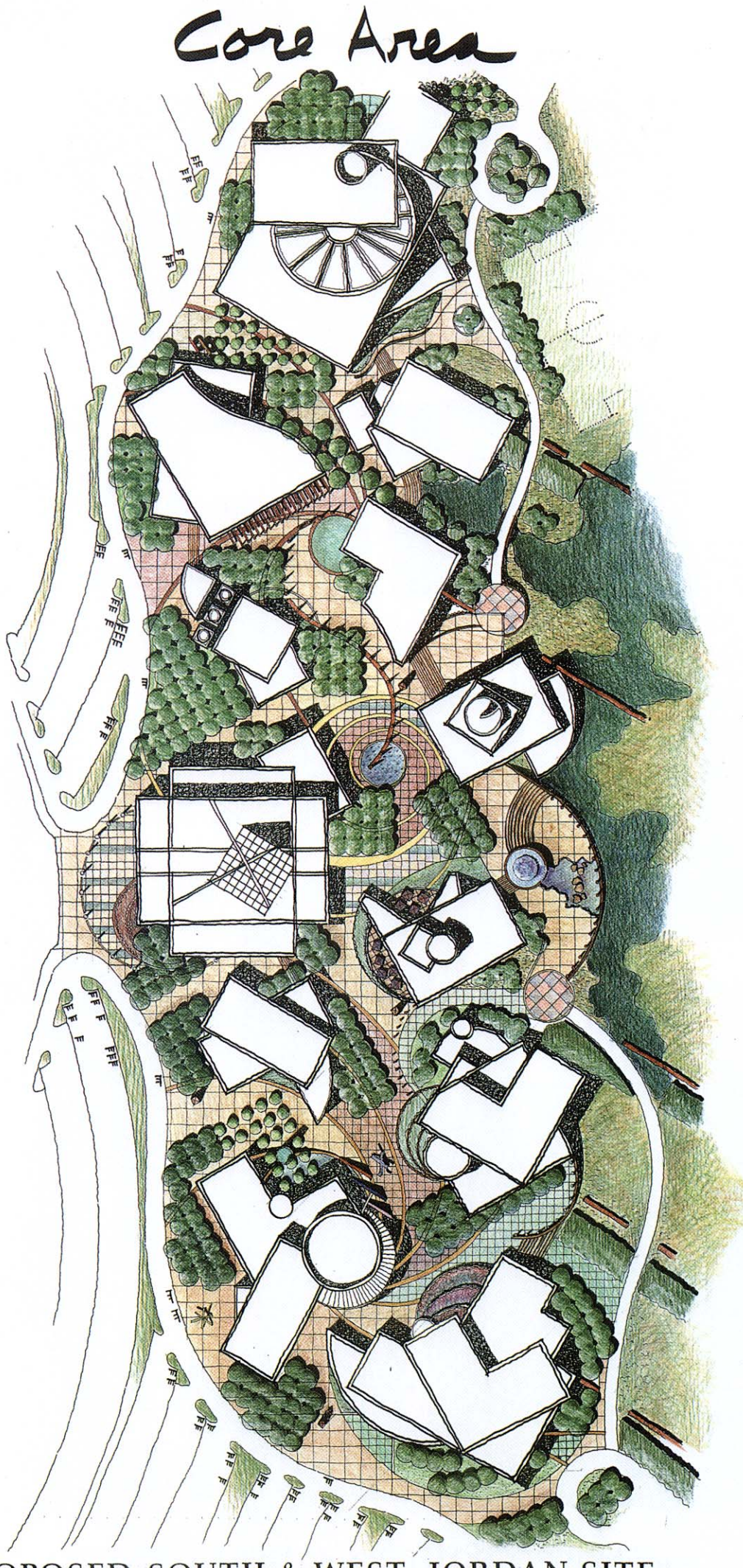
Master Plan



PROPOSED SOUTH & WEST JORDAN SITE

Hart, Fisher & Associates
EDAW

SALT LAKE COMMUNITY COLLEGE MASTER PLAN



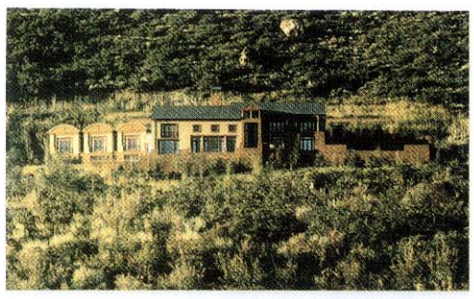
PROPOSED SOUTH & WEST JORDAN SITE

Hart, Fisher & Associates

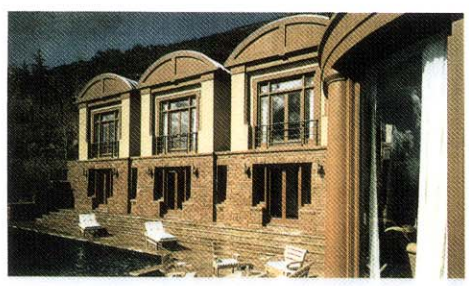
EDAW

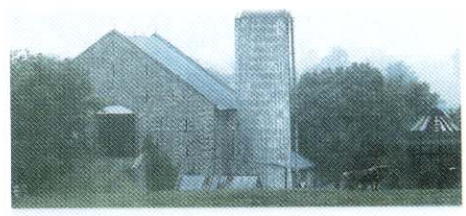
SALT LAKE COMMUNITY COLLEGE MASTER PLAN

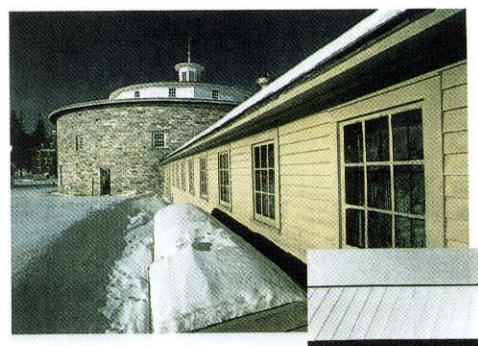
Character

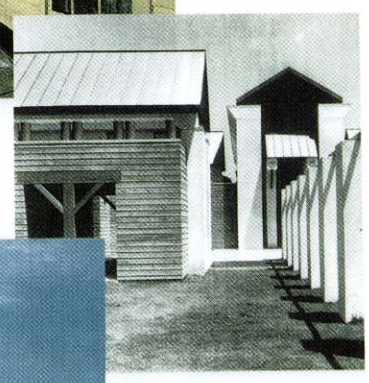


Land Environment

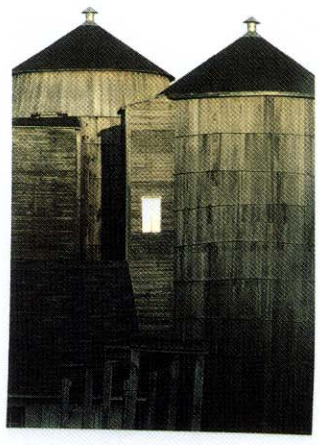








Architectural Form



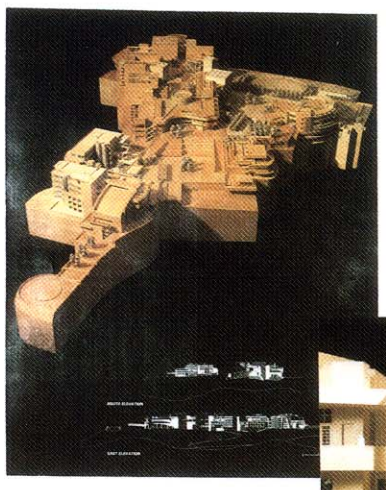
PROPOSED SOUTH & WEST JORDAN SITE

Hart, Fisher & Associates

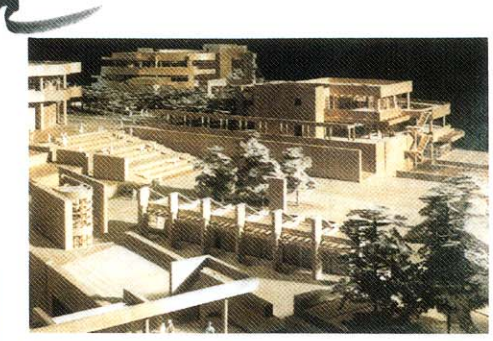
EDAW

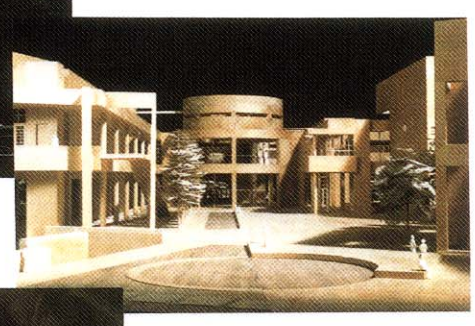
SALT LAKE COMMUNITY COLLEGE MASTER PLAN

Character



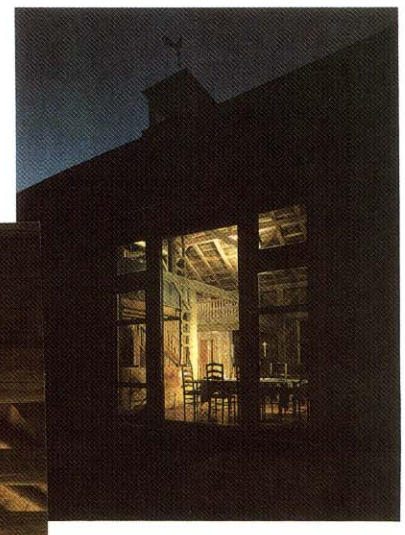
Outdoor Space

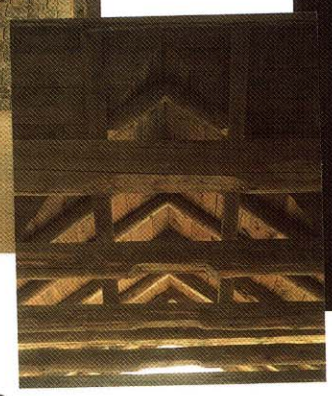


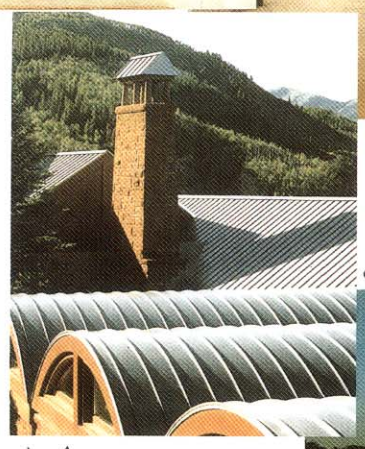


Transparency

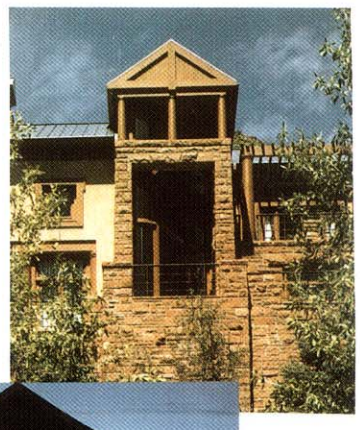
Indoor Space



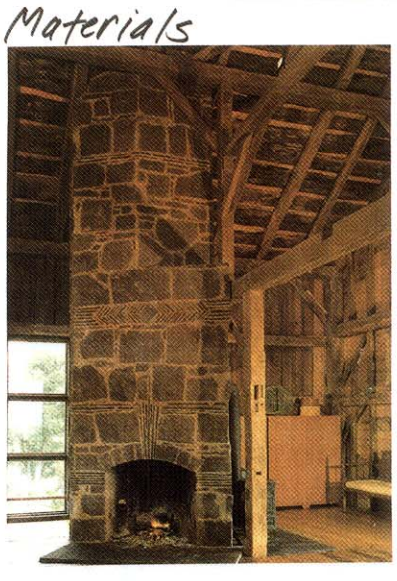


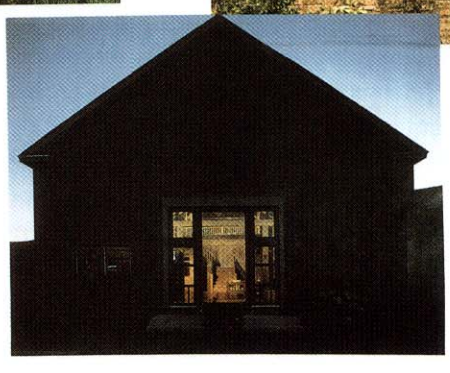


Color



Materials





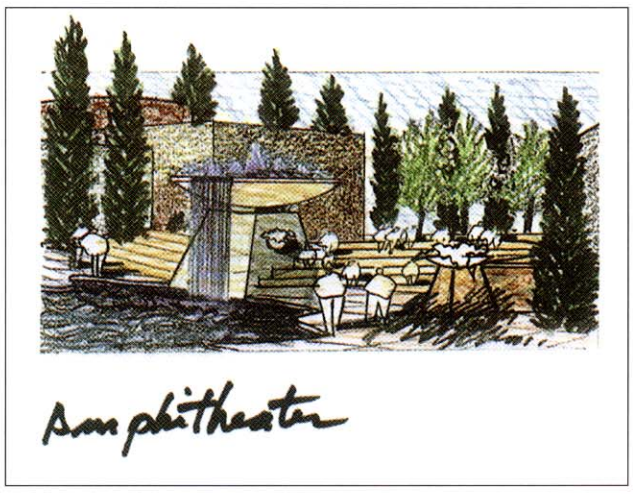
PROPOSED SOUTH & WEST JORDAN SITE

Hart, Fisher & Associates
EDAW

PROGRAMMATIC ASSUMPTIONS

SITE CAPACITY

The 90th South site will be able to provide on-campus services for 12,000 students. Its capacity will be limited by the number of vehicles it can accommodate. On a full-service campus, student enrollment of this magnitude would generate a requirement for 1.3 million square feet of instructional and support space and at least 3,800 parking stalls. With a schedule of morning and evening classes similar to that currently used at the Redwood Campus, there would be 9,000 to 11,000 daily trips to campus. The masterplan shows the development of facilities to accommodate this capacity.



ANTICIPATED PHASING

The first building planned for the site will be the centrally located Technology Center, a flexible, multipurpose technology-enhanced instructional building designed to meet interim needs for college presence on the site. The initial phase will also require development of campus infrastructure (including parking, key landscape elements, a central heat plant, and service tunnel). The masterplan has been designed to permit future construction to proceed outward in stages from the center of the campus, with utility tunnels expanding in segments to serve the new facilities in each phase. It should be recognized, however, that the nature of future building needs, the sequence of approval and funding, and the optimum location for proposed functions may alter the anticipated sequence of construction.

Several additional elements may be constructed in the relatively short-term future. Outdoor recreational facilities (a baseball diamond, soccer fields, tennis courts, bike paths, and a walking/jogging trail) may be developed in cooperation with the city of West Jordan, which has plans underway for several recreational developments. Under a cooperative agreement with the West Jordan and South Jordan fire departments, an emergency vehicle facility fronting on 90th South will be constructed to coordinate with initial campus development. It is anticipated that 3400 West will be closed to through traffic in the immediate future; should that closure be delayed, it must in any event be under way before campus construction begins so that construction traffic will not impinge on the adjacent neighborhoods.

INTEGRATION OF THE ARTS

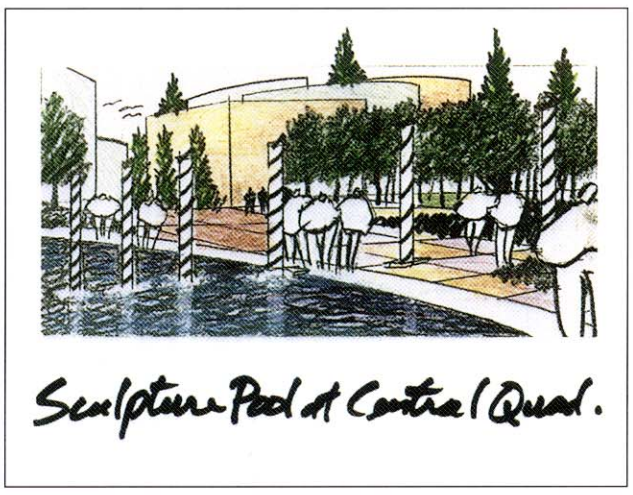
The campus should take advantage of the 1% for the Arts program to incorporate sculpture and other art forms to reinforce the campus identity and to provide an additional layer of educational experience as an integral part of campus life.

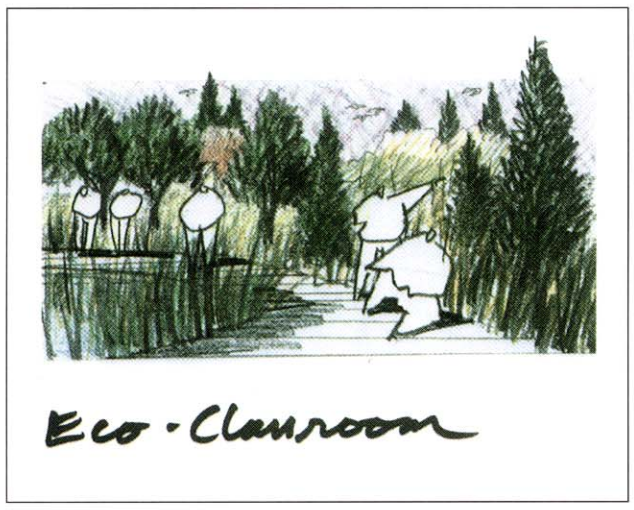
HISTORY AND TRADITION

The site adjoins a historic cemetery and has close associations with early settlements at Wight's Fort and Welby Junction. Some participants have suggested that it would be desirable to incorporate imagery, names, and other elements from this cultural heritage in the development of the new campus.

IMAGERY

Participants in the masterplanning process responded positively to an array of images from diverse sources and historic periods that reflect attributes congenial to these design goals, including a sense of tradition, warmth of materials, comprehensible human scale, transparency, and a complexity created by layered materials. This document includes depictions of pictorial elements from diverse traditions, including historic rural precedents, hill towns, traditional campus forms, elements that represent the diverse international heritage of the student body, and elements that symbolize technological innovation. These images and the elements drawn from them for use in conceptual details and elevations are intended to suggest character and scale, not to dictate design style. It is assumed that the desirable attributes represented by these elements will be integrated in a sophisticated contemporary design to create an image appropriate to the neighborhood and college context.





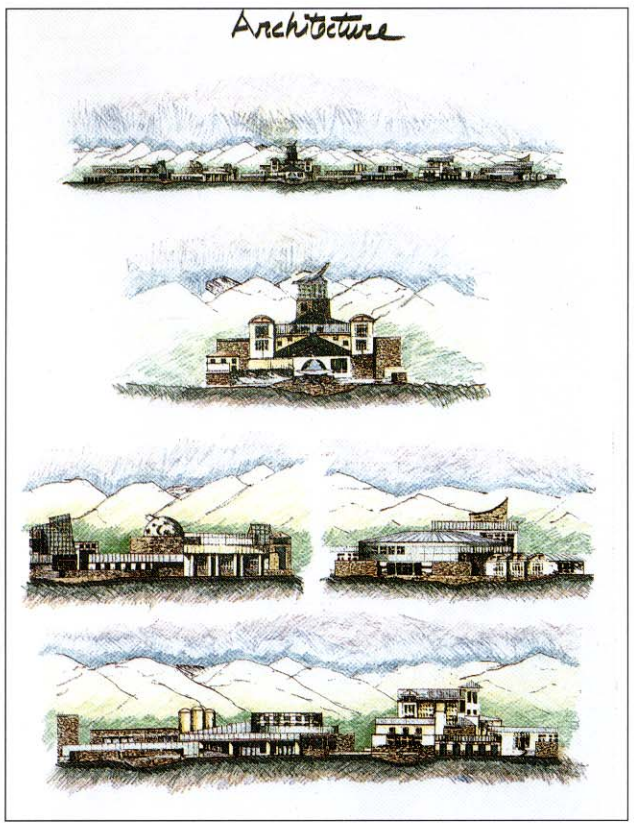
LANDSCAPE CONCEPT

Landscape development will be an integral part of campus design. Landscape design should provide diverse educational and recreational opportunities, enhance the character of campus open spaces, provide a buffer to separate the campus from neighborhood residences, minimize the impact of surface parking, and extend campus activity throughout the site.

Generally the landscape will be planted with diverse, seasonally variable materials that may include plants native to the region, historic materials and forms (such as bosques), and drought- and climate-tolerant species. To conserve water, traditional manicured bluegrass lawns and other formal water-intensive landscaping will be limited to special-impact areas, such as athletic fields and transition zones proximate to private residences and campus buildings.

RESPECT FOR THE ENVIRONMENT

Respect for the environment should be integral to the development of the masterplan concept. The location of major building areas will follow the existing site contours and take advantage of grade changes across the site and solar orientation. Major landscaped areas throughout the site will be developed with xeriscape and climate-tolerant plantings to conserve water, reduce maintenance requirements, provide an educational laboratory that can be used by various campus departments, and create wildlife habitat areas and interpretive trails.



THE GREEN EDGE

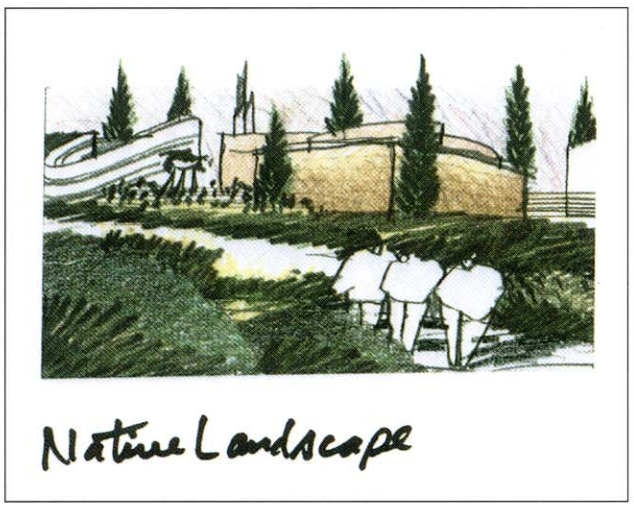
The campus will be surrounded by a "green edge," a landscape boundary along the periphery that will create transition to the adjacent community areas. At the east side of the site, where the campus will have the greatest impact on residential areas, a more extensive buffer area, designed to support climate-tolerant landscaping, will be created. While this space will create visually pleasing vistas, its intent is not solely decorative. In addition to serving as a buffer area with water features, greenspace, and view orientation, three landscape areas will provide retention/detention for stormwater and others will be designed as meadow and wetland laboratories for college programs in biology, environmental science, and horticulture.

CAMPUS ENTRY AND IDENTITY

The major campus entry on the west side should be identified by a major landscape element, such as a campanile, and should provide a view through the campus to the mountains beyond. As the campus develops, designers should take advantage of opportunities to provide visual identification at key site locations. Consideration should be given to the visibility of identifying elements, not only from pedestrian access points, but also from adjacent highways and secondary roads.

RECREATIONAL DEVELOPMENT

The masterplan identifies diverse areas that will offer students, staff, and local residents a variety of recreational opportunities, as well as supporting college physical education requirements. Some recreational facilities might be developed in partnership with the local communities.



Baseball: A baseball diamond designed to support both recreational use and the SLCC baseball teams should be located at the northwest corner of the site, adjacent to the Bangerter--90th South intersection, to minimize potential neighborhood disruption from associated traffic, lighting, and noise.

Soccer / Multipurpose Athletic Fields: Soccer and multipurpose fields, which will not be lighted for night use, may be placed along the east edge of the site, within the landscape zone. These manicured green spaces could be used to help to create transition from more formal and traditional neighborhood landscaping to the meadow/wetlands areas.

Tennis: Tennis courts might be located in the northeast corner of the site.

Walking, Jogging, and Bike Paths: A jogging / walking path will surround the campus. On the east side, the path will help to define the perimeter of the wetlands area, providing a manicured transition to the adjacent residential areas. Developing bicycle trails throughout the site would be desirable, both to provide recreational opportunities and to create additional non-vehicular transit options as part of an integrated transit plan. The campus should provide bike racks at convenient locations.

LOCATION OF FUNCTIONS

The masterplanning team was given a mandate to provide a flexible system that could accommodate a broad range of unknown future needs on the 90th South site. This system had to be consonant with diverse possibilities, from the development of minimal facilities at this site to the construction of physical facilities for the maximum number of students the site could serve. The masterplan also had to address the overall character of open and built spaces on the site. For that reason, the masterplan shows potential construction zones throughout the site, providing the total 1,300,000 square foot area projected as the need for the year 2015 and the site's capacity at current rates of vehicle use. These hypothetical buildings have been designed to suggest the scale and character of construction that would be desirable and the ways in which buildings placed on the superimposed grid system can define varied outdoor spaces to meet campus activity needs, create visual links throughout the center of campus, and preserve solar and view corridors for all facilities. After using these criteria to locate "buildings," planners then defined optimum zones and locations for various functions, based on space needs, circulation, anticipated effect on campus traffic, and potential relationships with other functions. These are described below and identified by letter on the adjacent key plan. It is assumed that *all* the "buildings" shown (except those designated for physical plant and support functions) would house interdisciplinary instructional components, including classrooms, class labs, conference rooms, electronic and media facilities, and faculty and staff support space. The list below focuses on special and support functions that might be added to these flexible generic spaces to meet the specific needs of individual instructional programs that were identified in the masterplanning process as potential campus functions. **The depiction of buildings on this drawing and the identification of potential use areas, however, should not be taken to imply any recommendation for the construction of facilities beyond the initial phase or any decision about the desirability of providing facilities of a given type, both of which are decisions beyond the scope of this report.**

Building areas have been extrapolated from space allocation standards established in the Paulien report and the report of Ira Fink, Ph.D.

A. A baseball diamond, which would serve both SLCC teams and physical education classes, will require lights for evening use by college teams. Neighborhood residents prefer this location, which will minimize the impact of lighting, noise, and event traffic on their homes. Location adjacent to 90th South and the Bangerter Highway would also provide desirable visibility for these events and programs.

B. This space has been set aside for a fire and emergency vehicle station to be jointly developed by South Jordan and West Jordan. This location offers convenient access for fire trucks and emergency vehicles. It is sufficiently remote from central campus facilities and circulation routes to allow buffering of noise and hazardous traffic.

C. Convenient delivery access and separation from major pedestrian routes would make this an ideal location for maintenance shops and bulk storage and delivery functions. Potential noise and traffic from 90th South, and from the proposed emergency vehicle station, would be less of a problem for these uses than for instructional and public spaces.

D. The historic Wight's Fort cemetery, which is still in operation, lies outside the site boundaries.

E. An existing water tower, located in this area, lies outside the site boundaries.

F. Non-lighted recreational facilities, such as tennis courts, might also be located near the periphery of the site at the east edge, adjacent to residential areas.

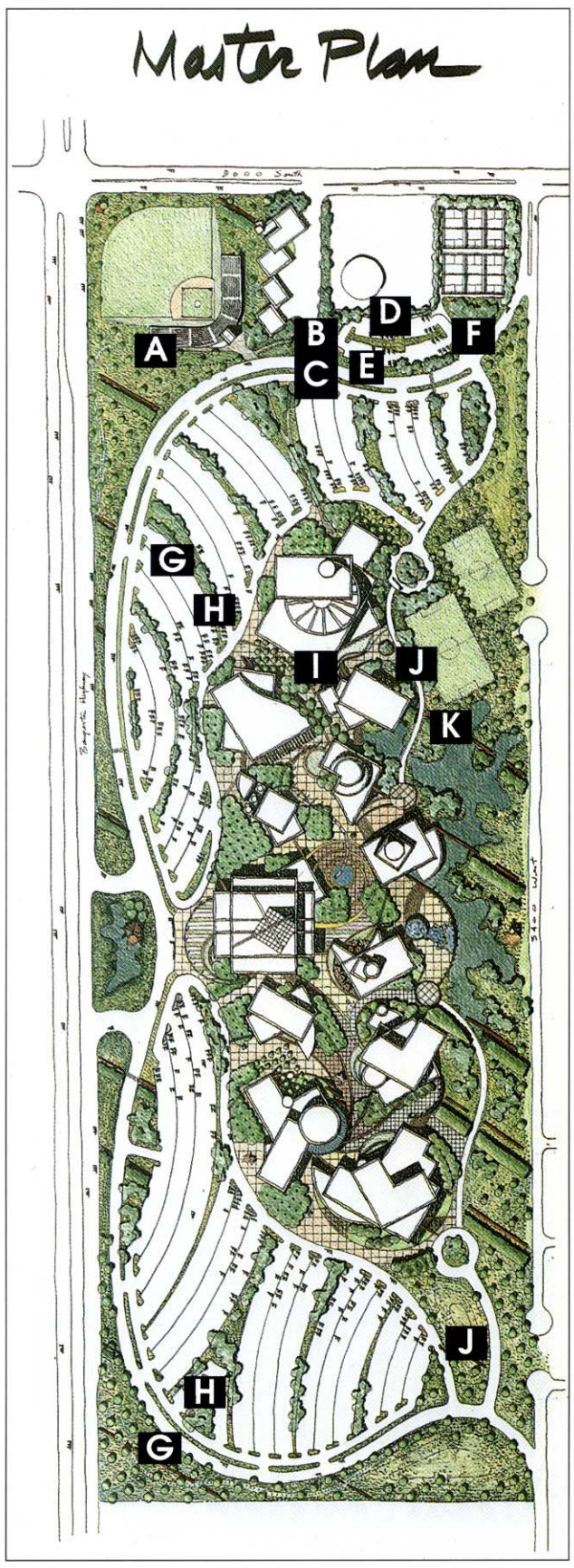
G. A perimeter loop road will provide circulation around the campus periphery, reducing stack time in parking areas.

H. Parking lots extend in an arc around the west side of the site, to create a buffer from the Bangerter Highway and provide convenient pedestrian access to all parts of campus. Parking has been deliberately eliminated on the east edge of the campus to create an outdoor use area and respect the character of the adjacent neighborhood.

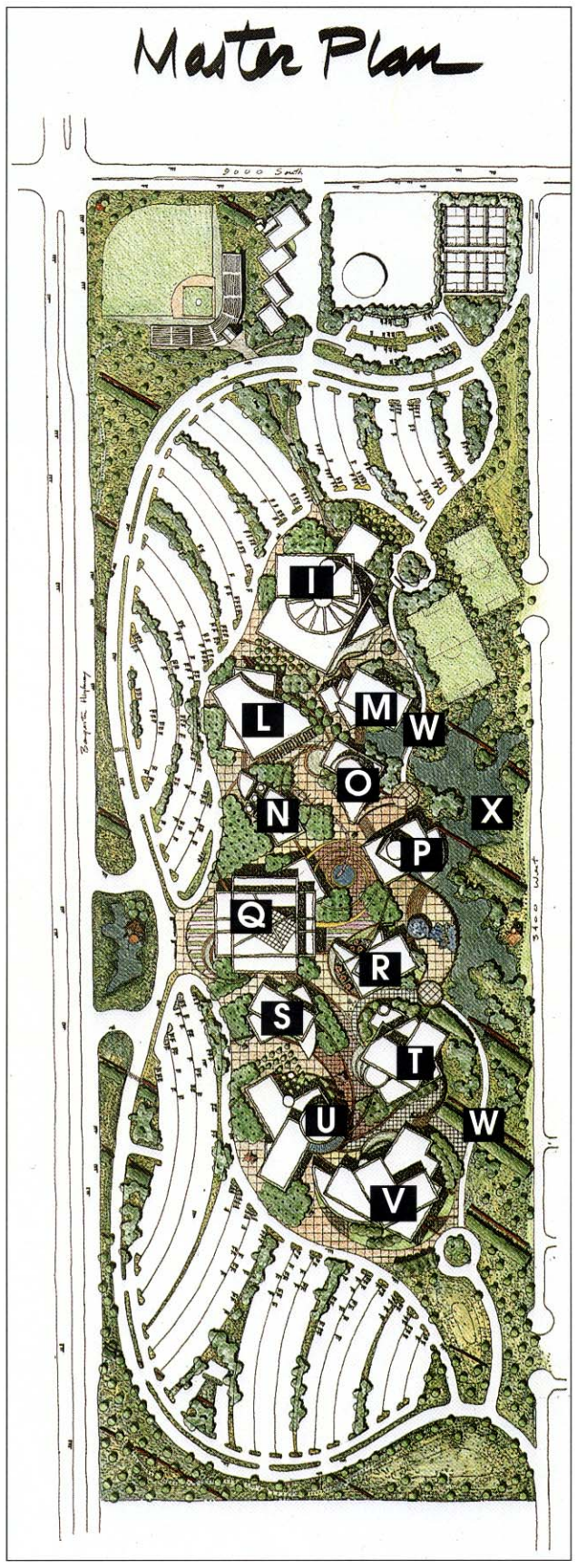
I. This 200,000-square-foot complex, located adjacent to baseball, soccer, athletic fields, and tennis courts, with convenient service access and associated parking, would be ideally placed to house physical education programs, support services, and related functions that need convenient access to outdoor recreation areas, the capacity to accommodate event traffic, and provision for delivery of equipment and bulk supplies. The comparatively steep grades in this portion of the site might be used to help reduce the visual mass of a large gymnasium or arena.

J. Bus loops and drop-offs should be located to provide convenient access for pedestrians and Flextrans users, to minimize conflicts between buses and other vehicular traffic, and to allow the buses to enter and exit quickly to expedite mass transit schedules. To encourage students and staff to leave their private automobiles at home, those who arrive by mass transit should be closer to major campus facilities and services than those who arrive by car and park in campus lots.

K. This location, proximate to neighborhood residents, might be used for multipurpose athletic fields or soccer fields, which would not be lighted for evening use. Manicured playing fields might be used to help create a transition from neighborhood landscaping to the internal areas of the campus where climate-tolerant landscaping will be used to reduce water consumption and maintenance. Playing fields might also provide a supplemental detention area for storm water if required.



THE MASTERPLAN CONCEPT



L. This 162,000-square-foot facility, with its access to convenient event parking and proximity to the campus center, offers an ideal location for a fine and performing arts complex. This location could easily accommodate the relatively heavy service and delivery requirements of some performing arts activities, as well as peak event traffic. It would be ideal to provide access for disabled and elderly users. Conference facilities might be clustered with an auditorium in this complex to create a community and convention center, which would benefit from proximity to athletic facilities. This location would provide visibility and assist designers in creating a prominent identity for these public functions.

M. A 40,000-square-foot instructional building in this area might meet the needs of the humanities and general education programs, which would benefit from proximity to functions such as a media/resource center and to related programs in the fine and performing arts. With primarily office and classroom functions, this building would have less need for major service access and event parking, so it could be in a location more remote from parking and service roads.

N. The 20,000-square-foot building shown here, supplemented by smaller utility structures located to serve each cluster of two to four buildings, would accommodate campus needs for a central physical plant. This central location would minimize tunnel and utility runs during the initial development phases. Proximity to parking and services would accommodate both ongoing delivery of materials and supplies such as road salt and the occasional (but, in the years of initial development, presumably frequent) installation of major equipment such as boilers. It would not include maintenance and storage functions (which should be placed on the periphery of campus) and some building support functions. It is assumed that each group of 3-4 buildings will have its own small service facility to house equipment such as generators, chillers, and switch gear.

O. This centrally located 54,000-square-foot facility would offer proximity to humanities, arts, and technology functions, all of which would be primary users of a media/resource center. It occupies a pivotal location on the mall that would be appropriate for a major public facility such as a resource center and a small gallery or exhibit space.

P. The 87,800-square-foot structure shown in this location, which has direct access to the wetlands and outdoor laboratory areas, would be a significant instructional resource for programs in the biological and environmental sciences.

Q. A 100,000-square-foot complex has been shown at the center of the campus, in a location that would be ideal for the first development on the site. A building constructed here will anchor the plaza space and create a strong public identity for the campus. This building would have the capacity to function as a stand-alone multipurpose center, with convenient access to parking, bus drop-offs, the main campus entry, and the physical plant. It is assumed that this first building would have extensive technology resources; the central location of these resources would facilitate physical linkages (data, cable, fiber optics) to other parts of the campus in subsequent phases.

R. With a capacity of 83,580 square feet, this complex might be an appropriate site for student center/student services facilities and administration. Its centrality allows convenient access from all campus areas. Proximity to the center is also desirable since this facility would be among the higher priorities for development in the initial project phases. The location would be conducive to the creation of a campus center building with a clearly defined public identity that would provide orientation for students and visitors.

S. This 66,000-square-foot building, with convenient vehicular access, could serve as the home for developmental programs and services, including a tutoring center. A location such as this one would be ideal for students, who need quick and convenient access to these services; it would also give these programs the high visibility they require to make students aware that the services exist.

T. If an instructional building were dedicated to the physical sciences, this 131,000-square-foot facility might provide a convenient location, with proximity to other programs in the sciences.

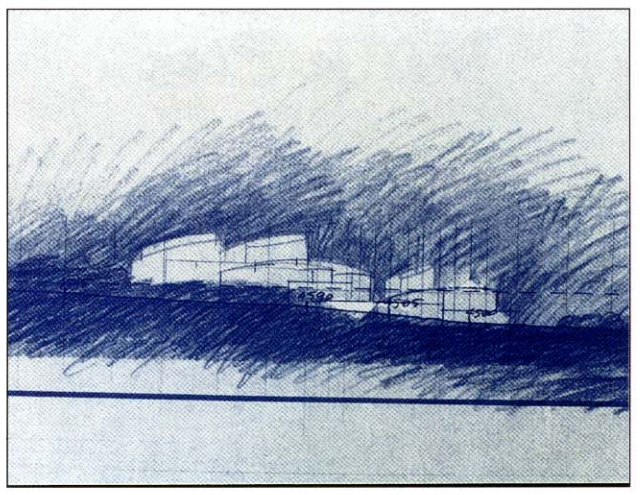
U. This 116,000-square-foot facility, with convenient access to vocational/technical and business/technology buildings, would be a congenial location for visual arts programs, which emphasize computer graphics and drafting.

V. Convenient vehicular access and comparative isolation make this location desirable for vocational and technical programs, which may include a heavy machinery component. This 153,000-square-foot facility could accommodate service and delivery needs, including large equipment and machinery, without disrupting other campus activities. It would allow separation to minimize potential noise and hazards intrinsic to some vocational programs, yet still provide a high-profile location for those programs, with visual and spatial relationships to connect them to other instructional functions.

W. A service road, which will appear to be a landscaped pedestrian walkway, will provide emergency and service access to the eastern tier of buildings.

X. A wetlands/meadow area, planted with native and climate-tolerant species, will provide an outdoor laboratory for programs in biological and environmental science and horticulture. It will also help to provide a buffer for neighborhood residential areas across 3400 West.

UTILITIES AND SERVICE



As outlined in the site selection proposal, the cities of South Jordan and West Jordan will provide utility service for the campus and will waive all utility connection fees and storm drainage fees until the year 2000. The city of West Jordan will build the main water line (an 8" diameter extension) to the center of the site. The cities will install a 14" diameter sewer line extension onto the site and will build a storm drainage retention pond and pipeline from the site.

After reviewing the comparative advantages of individual building systems vs. a central plant, planners recommend the construction of a central heat plant, located near the center of campus, to provide steam. The central plant will allow the use of a distributed system with a lower interruptible rate for natural gas because diesel fuel can be used as a backup. A central plant will also simplify maintenance (which will reduce long-term staffing costs), reduce the space required for mechanical service in individual buildings (which will improve overall campus space efficiency), and allow the installation of multiple boilers which can be staged as the demand changes (which will improve efficiency).

A central maintenance/service/utility tunnel system connected to all campus buildings will run essentially through the center of campus, probably beneath the plaza area. Smaller utility buildings, housing emergency generators, high voltage switches, chillers, and cooling towers, will be designed and located so that each can support a cluster of two to four adjacent buildings. This will allow the use of ceramic cooling towers, which have a much longer life but are not available in smaller sizes, and permit the staging of chillers for maximum efficiency.

The campus will have a 12,470-volt loop distribution system with the option of feeding from either of two substations. High-voltage cable, telephone, and data lines will be routed through the utility tunnel. Four-way switches at the smaller utility buildings will permit independent building switching.

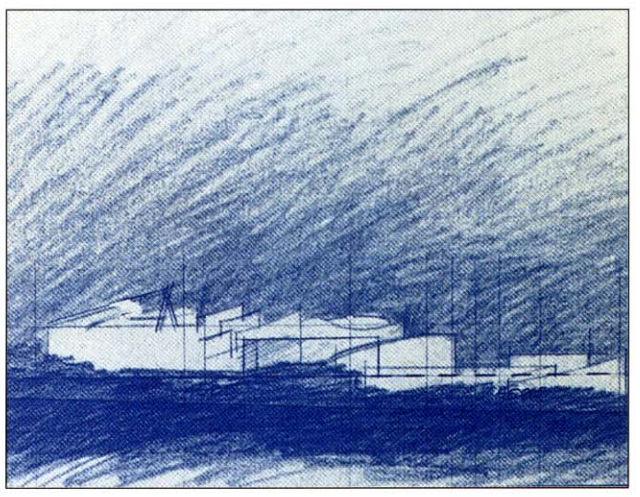
A storage and maintenance building with some limited shop facilities will be located at the north edge of the site, adjacent to the cemetery, the water tower, and a fire/ emergency services substation.

To provide emergency and service access to the east side of the complex, a minimal service route, with a drivable paver base rather than full asphalt, will be provided. This route should be disguised as a landscaped pedestrian walkway. Because service areas will be visible from campus buildings, service-element clutter should be kept to a minimum and all service entries should be screened with berms and landscaping.

In an area set aside at the center north portion of the site, the West Jordan and South Jordan fire departments will fund, construct, and operate an 8,000 sf, four-bay facility for fire and emergency vehicles and staff.

Gas and sewer lines will be relocated to the outside of the campus. UDOT has a right-of-way to use part of this site for stormwater drainage; this drainage will be channeled to a separate area at the southwest corner of the site to minimize the potential for contamination from highway runoff. Site drainage will be provided in the southeast and northeast corners of the site. Runoff water must be kept away from educational lab areas and wetlands habitat to prevent environmental contamination.

Utility and service development will conform to Salt Lake Community College campus standards.



TRANSIT ASSUMPTIONS

PARKING

Parking will be placed on the west side of the site, where it is most conveniently accessible to the Bangerter Highway. The 240' open parking area with a grass strip will facilitate snow removal and storage. Location of parking to the west will help to buffer the central campus area from the noise and traffic of Bangerter Highway. Dispersed parking will provide convenient access and reduce the required travel distance to all buildings. Parking will be confined to the periphery so that the campus proper will retain a pedestrian orientation. Within the parking areas, internal vehicular circulation will follow site contours to minimize disruption of the site. A peripheral loop road will provide access to parking areas and allow efficient traffic flow.

ACCESSIBILITY

Emphasis must be placed on providing convenient accessibility to all areas of the campus. Design for accessibility will have a high priority because Salt Lake Community College will continue to serve a significant portion of the state's disabled students and because the student body of the future will include increasing numbers of students in older age groups, for whom walking distances will be a critical issue.

The central pedestrian courts, which will link all of the proposed campus facilities, will be designed at a single grade to facilitate access. Drop-off points for Flextrans should be provided at each campus entry. Consideration should also be given to the development of a vehicular shuttle system throughout the 90th South campus, with connections to other SLCC sites and particularly to the large campuses at Redwood Road and South City.

MASS TRANSIT

Encouraging mass transit will benefit the campus by relieving vehicular congestion on the site and in the surrounding area. Bus entry should be provided from the Bangerter Highway, with a turnaround at the main campus entry. Additional turnarounds should be provided at the north and south entry points to allow convenient access to all points on the campus. Should a light rail system be implemented, it would be desirable to have a stop on campus.

INGRESS / EGRESS

Possible campus entry points have been reviewed in light of UDOT policy, highway codes, and neighborhood considerations. On the west, access points from the proposed Bangerter Highway will be limited by requirements for acceleration and deceleration distances and by the proximity of traffic lights planned for 90th and 98th South. Planners considered an overpass to permit access and parking on the west side of Bangerter but rejected this option because of strong negative response from the community and the difficulty of moving students across the highway. On the north, the potential for direct access from 90th South will be limited by proximity to the signalized intersection with Bangerter and by the existing water tank and historic cemetery. Limited access for emergency vehicles only will be provided along 90th South. On the east, 3400 West will be closed to through traffic to meet neighborhood safety concerns. Cul-de-sacs will be created along the east edge of the site on 3400 West to provide protection for the residences that front on 3400 West. Entries at the northeast and southeast corners of the campus on 3400 West will provide access to 90th and 98th South. At the south edge of the site, which adjoins developed land, there will be no direct vehicular access. To discourage students from parking in residential areas, the landscape buffer at the east side of the site should not include any pedestrian pathways that provide direct access to campus buildings.

EMERGENCY AND SERVICE ACCESS

A secondary emergency/service route on the east will allow direct vehicular access to all buildings. Care must be taken to minimize the visual impact of this road and associated service elements so that the character of the campus center is not disrupted. Grass pavers or turf blocks will be used to accommodate vehicular emergency and service traffic while minimizing landscape disruption.

DFCM CHECKLIST

- ⊠ Areas of Focus
  - ⊠ Academics
  - ⊠ Programs
  - ⊠ Students
  - ⊠ Faculty
- ⊠ Institutional Direction for Next 20 Years
- ⊠ Significant Relationships
  - ⊠ Board of Regents
  - ⊠ Community
  - ⊠ Citizens
  - ⊠ Local Governments
  - ⊠ State Governor
  - ⊠ Legislators
  - ⊠ Administrators
  - ⊠ Faculty
  - ⊠ Students
  - ⊠ Other SLCC Sites
- ⊠ Academic Master Plan
  - ⊠ Overall
  - ⊠ For 90th South Site
  - ⊠ Coordination with other SLCC sites and with other higher education sites
- ⊠ Components
  - ⊠ Instructional
  - ⊠ Auxiliary Services (Student Services / Union, Bookstore, Parking, Housing)
  - ⊠ Support (Administration, Library, Counseling, Maintenance)
- ⊠ Communications Technologies
  - ⊠ Ed Net
  - ⊠ Information Highway
  - ⊠ Fiber Optics
- ⊠ Enrollment Policy
  - ⊠ Open
  - ⊠ Closed
  - ⊠ Limited
- ⊠ Demographics
  - ⊠ SLCC Overall
  - ⊠ 90th South Site
- ⊠ Site Issues
  - ⊠ History
  - ⊠ Archaeology
  - ⊠ Assets
  - ⊠ Topographic Surveys
  - ⊠ Environmental Assessments
  - ⊠ Zoning and Setbacks
  - ⊠ Geotechnical Investigations (Soil, Water, Drainage, Water Table)
  - ⊠ Easements and Rights-of-way
  - ⊠ Access
  - ⊠ Boundaries (Open or Closed, Hard or Soft Edge)
  - ⊠ Future Expansion
- ⊠ Campus Plan
  - ⊠ Formal
  - ⊠ Informal
- ⊠ Architectural Style and Materials
- ⊠ Environmental Approaches
  - ⊠ Passive or Active Solar
  - ⊠ Daylighting
  - ⊠ Direction and Intensity of Winds
  - ⊠ Views Inward or Outward
- ⊠ Circulation
  - ⊠ Vehicular
  - ⊠ Feeder
  - ⊠ Adjoining
  - ⊠ Peripheral
  - ⊠ Service
  - ⊠ UTA
  - ⊠ Light Rail
  - ⊠ Pedestrian
  - ⊠ Interior
  - ⊠ Exterior
  - ⊠ Access Points
  - ⊠ Entries
  - ⊠ Drop-offs
  - ⊠ Identification / Signage
  - ⊠ Emergency Vehicles
- ⊠ Transportation Studies / Plans
  - ⊠ UDOT
  - ⊠ UTA
- ⊠ Landscape Design
  - ⊠ Quads
  - ⊠ Malls
  - ⊠ Types of Planting
  - ⊠ Use of Irrigation
- ⊠ Land Use Percentages
  - ⊠ Hard Surface
  - ⊠ Landscape
  - ⊠ Future Growth Reserve
- ⊠ Parking
  - ⊠ Ratios
  - ⊠ Separate areas for faculty, staff, visitors, and students
  - ⊠ Common parking
- ⊠ Utility Systems
  - ⊠ Water
  - ⊠ Storm Drainage
  - ⊠ Power
  - ⊠ Sewer
  - ⊠ Communications
  - ⊠ Heating
  - ⊠ Cooling
  - ⊠ Central Plant
  - ⊠ Individual Systems

SALT LAKE COMMUNITY COLLEGE

JORDAN CAMPUS DEVELOPMENT PLAN

STATE DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

DFCM NUMBER RL95024

15 FEBRUARY 1997

PARTICIPANTS

SALT LAKE COMMUNITY COLLEGE
STEERING COMMITTEE

Gordon Storrs	Master Planning Coordinator
Paul R. Gundersen	Director of Facilities
Robert L. Askerlund	Assistant Director, Facilities
Carl D. Meyer	Project Manager, Facilities
David K. Stauffer	Architect, Facilities

STATE DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

Richard Byfield, AIA	Director
Wayne Bingham, AIA	Building Program Director
Rick James, AIA	Lead Project Manager
Benjamin Hutchinson	Project Architect
Craig Wessmann	Mechanical Engineering Review
Gaylen Rogers	Electrical Engineering Review

PLANNING TEAM

Hart Fisher Smith & Associates — **Design Team Leader**
Architecture, Programming & Planning

David H. Hart, AIA	Design Principal
Barry Smith, AIA	Principal in Charge
Christine Barton	Team Member

EDAW, Inc. — **Planning and Landscape Design**

Russell Butler, ASLA	Team Member
Richard Flierl	Team Member

Laura Bayer — **Program/ Document Development Consultant**

Fehr and Peers Associates	**Traffic Analysis**
Bennion Associates	**Mechanical Engineering**
Spectrum Professional Services	**Electrical Engineering**

THE DEVELOPMENT PLAN CONCEPT

INTRODUCTION

Since the development of a Master Plan Concept in open workshops in March 1996, Salt Lake Community College, the State Division of Facilities Construction and Management, and the Hart Fisher Smith & Associates team have continued to refine the plans for the new campus. The Development Plan supplements the Master Plan and summarizes the changes that have occurred since the completion of the initial workshops. Items may be found in seven general sections on the page numbers listed:

- Introduction and Initial Assumptions 34
- Development Plan Principles and Organizing Elements 35
- Site Development and Phasing 36
- Transportation and Circulation 38
- Topography and Landscape 39
- Site Development and Utilities 40
- Utilities 41

The Development Plan summary is intended to highlight the most important elements in the evolution of the campus plan and to provide some indication of the assumptions, data, process, and criteria that have guided planners. The site formerly referred to as the "90th South Campus" has now been officially named the "Jordan Campus."

PHASE ONE DETERMINANTS: INITIAL ASSUMPTIONS FOR THE DEVELOPMENT PLAN

The illustrations shown here (drawings by Ben Hutchinson, left) offer a visual summary of the concepts that provided the starting point for the second phase of the planning process.

Landscape / Water

The Master Plan Concept identified water and landscape as an integral part of the Jordan Campus, calling for the use of these elements to create buffer zones and screening, establish outdoor education and activity areas, integrate campus building elements in a distinctive environment.

Organizers

Solar orientation, topography, and campus relationships with the surrounding residents, communities, and businesses shaped the Master Plan Concept design.

Circulation

The Master Plan Concept showed a road around the periphery of the campus, a landscaped service drive to allow delivery and emergency vehicle access to the center, and entries at the Bangerter Highway and 3400 West. The initial plans reflected the goals of preserving an accessible pedestrian core area, providing efficient vehicular and mass transit access, and limiting vehicular impact on adjacent residential areas.

Views

The Master Plan Concept showed buildings sited to take advantage of views to the east and west, and staggered to allow views into the heart of the campus from the periphery. It also reflected care to ensure that service elements would be screened and campus buildings would not block neighborhood views.

First Phase

The Master Plan Concept located the first buildings and access along the Bangerter Highway corridor, with future development moving out from the center of the campus in phases.

Utilities

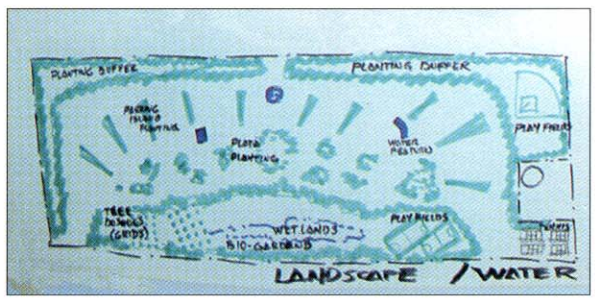
The Master Plan Concept assumed utility distribution from the center of campus, with loops branching to the north and south.

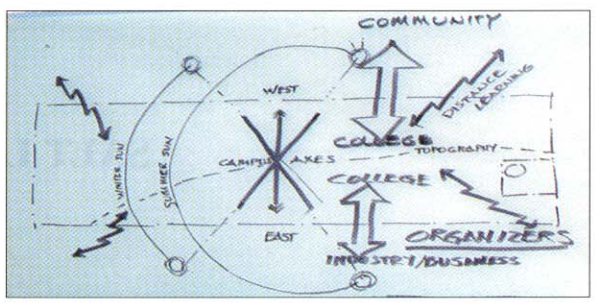
East/West Site Section

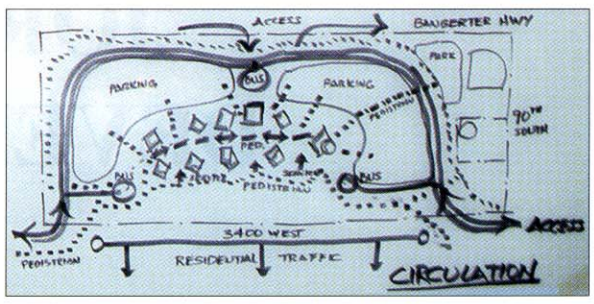
Initial plans showed a design intended to take advantage of the natural slope of the site from west to east, with buildings tucked into the hillside to reduce apparent mass, preserve views, and integrate the structures with the environment.

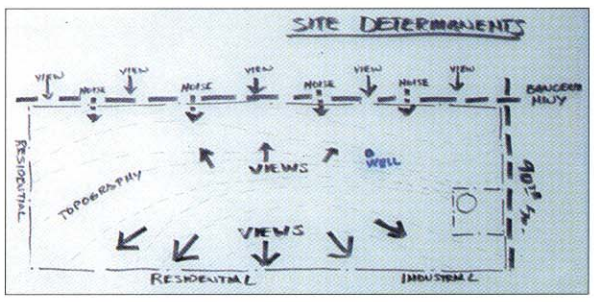
Relationships

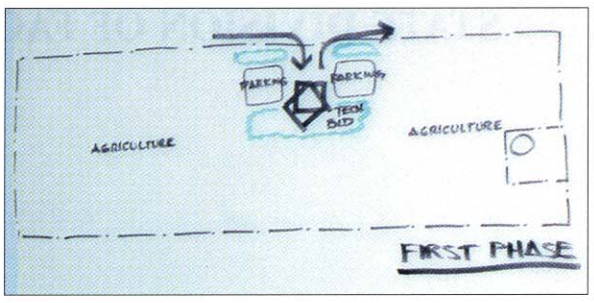
The Master Plan Concept placed buildings with public functions on the western (outer) arc of the campus, adjacent to the peripheral road and parking areas. Residential areas to the east of campus were buffered from campus vehicular traffic, and cul-de-sacs were created on 3400 West to reduce vehicular penetration in the neighborhood.

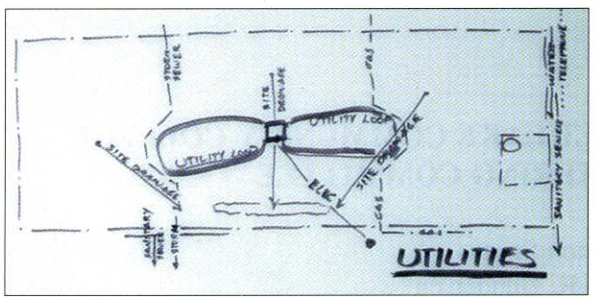


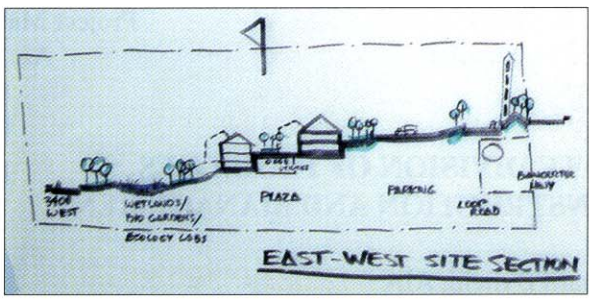


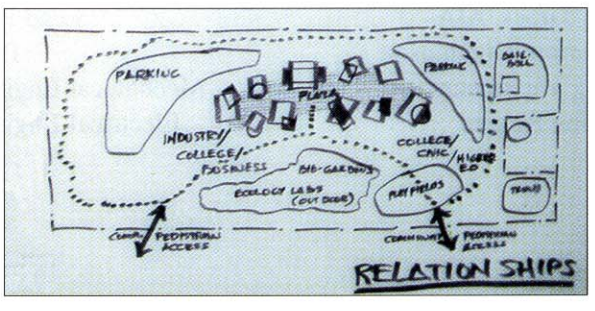












DEVELOPMENT PLAN PRINCIPLES AND ORGANIZING ELEMENTS

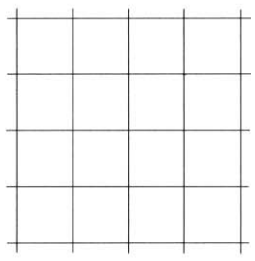
The general approach, goals, and planning principles outlined in the Master Plan Concept continue to guide the campus plans. To increase the usefulness of the conceptual plan for future administrators, planners, and designers, however, the Development Plan re-examines and refines some key elements.

This document represents only a brief summary of the materials generated in this lengthy and detailed process. Additional documents and information can be found in the central reference files maintained by the Facilities department at the SLCC Redwood Campus, and in the detailed Design Criteria, which are being developed as the planning process continues.

ORGANIZATIONAL GRIDS

The Master Plan articulated the concept of grids that would organize the site to take advantage of orthographic orientation, site, and view. Further development has transformed these grids from a theoretical concept to a practical system for campus design and construction.

MASTER COORDINATES/ ORTHOGONAL GRID



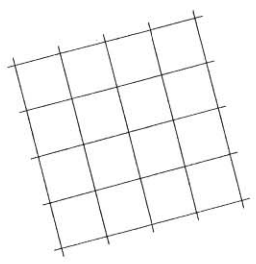
A master orthogonal grid, marked in 100-foot increments, will allow designers to precisely locate every point on the site. The grid origin (control point) lies at the northwest corner of the site, at the intersection of Bangerter Highway and 90th South, where the property lines cross.

The central campus building will be oriented to this orthogonal grid to reinforce its prominence. All other buildings will be oriented to the solar grid.

BENCHMARKS

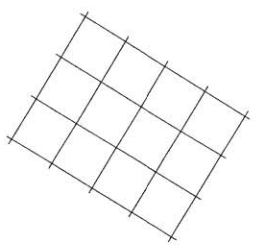
To clarify the alignment of the orthogonal grid and the associated solar and view grids, benchmarks will be placed at three locations that are likely to remain undisturbed on or adjacent to the site (in the cemetery, at the southwest corner of the plot, and on the existing aqueduct to the west).

SOLAR GRID



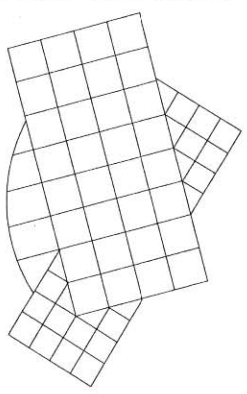
The solar grid, reoriented to 15° east of due south, has become the primary design grid. All campus buildings should be developed on this grid to take advantage of daylighting. The grid will allow the campus to explore other solar options, such as solar heating, in the future.

VIEW GRID



The view grid is oriented 45° from the solar grid. Buildings and plazas will take advantage of this orientation to provide views of major site features and vistas of the Wasatch Mountains beyond.

BUILDING STRUCTURAL GRIDS



The major design grids are intended to organize the overall campus and create continuity among the building elements. They need not be used, on an individual building level, for the layout of columns and structural elements. This figure (left) demonstrates how appropriate building structural grids might be used to reinforce the logic of the campus grids.

DEFINITION OF PHASE ONE

The original Master Plan Concept showed a campus developing from the center outward, with an initial building and the Utility Distribution Center located at the center of the property's north-south axis. This plan called for developing two initial access points, one from the Bangerter Highway and one from 3400 West.

As the Development Plan evolved, planners decided that locating the first phase development at the north end of the site would better meet campus needs. A series of considerations contributed to this solution. Changes in the configuration of the Bangerter Highway entry shifted campus buildings to the west and eliminated the site initially proposed for the Utilities Distribution Center. Utilities analysis determined that locating the distribution center in proximity to existing utility services (which run primarily along 90th South) would reduce infrastructure costs. Relocating Phase One at the north end of the site will reduce the amount of roadway, utility distribution systems, and infrastructure development required in the initial phase. Establishing the first buildings at the north face of the site will shelter the plaza area from winter winds and snow, consolidate the unfinished construction in a single zone, and provide a "finished face" to the community. Should funding become available for the baseball diamond, much of the infrastructure to serve it would be in place. With this scheme, construction traffic for the initial phases will not have to be routed through residential areas.

The result is a plan that locates the initial phase of development (including both an instructional building between grids S1080 and S1320 and the first phase of the Utilities Distribution Center between grids S360 and S480) at the north end of the site, with a single entry from the junction of 90th South and 3400 West. This scheme maximizes flexibility, provides greater efficiency, reduces the costs of developing an initial phase, minimizes neighborhood disruption during initial construction, and creates a finished campus edge.

PHASED DEVELOPMENT

As enrollment grows, the campus may be developed from north to south. The Development Plan allows sequential construction of the campus in phases determined by building needs and the availability of funds, with the southern portion of the site remaining undeveloped in the initial phases. Each phase has been defined to include an instructional building, a portion of the Utilities Distribution Center where appropriate, and the associated parking, circulation, infrastructure, and landscape features (see chart, following page). It should be noted that the phasing of parking, landscape, and infrastructure has been planned in accordance with the logic of the site, so the amount of parking and roadway in any given phase will not necessarily correspond directly to the gross square footage of building area constructed in the same phase.

The Master Plan Concept identified specific functional designations for individual buildings. The Development Plan identifies buildings only by area and location, creating a system that can respond to the College's programmatic needs on a building-by-building basis. The maximum buildable square footage for each phase has been established by parcel size and topography. Buildings with public functions that will generate high traffic levels and require event parking, as well as those that house functions requiring large truck deliveries, should be located on the western tier of the campus adjacent to roadways and parking.

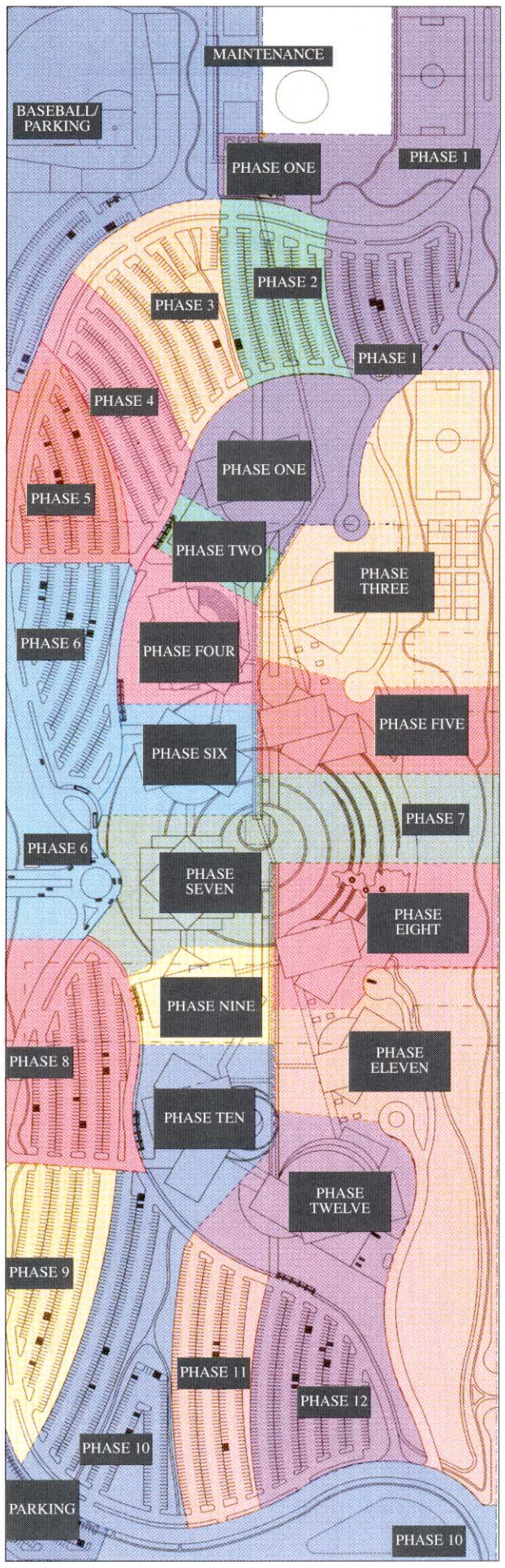
PHASING OF CAMPUS ENTRIES

The initial vehicular entry will be developed at the northeast corner of the site, from 90th South. A single entry will be sufficient to serve the campus until it reaches an enrollment of 2,500 to 5,000 FTE students. The second entry to be developed will access the campus on the west, from Bangerter Highway, at 9400 South. When the campus is fully developed, a third entry will be provided from 3400 West at 9800 South.

OTHER MAJOR SITE CHANGES

Additional traffic information led planners to move the baseball diamond to the east. This, in turn, resulted in the reconfiguration of the facilities maintenance yard west of the existing cemetery. Plans for an on-campus fire station were eliminated. To reduce confusion for drivers, direct access to the maintenance yard from 90th South was eliminated. To increase safety and improve traffic flow, the northeast entrance will occur directly from 90th South rather than 3400 West.

SITE DEVELOPMENT AND PHASING



CAPACITY BY PHASE

PHASE	BUILDING AREA (GSF)			PARKING STALLS (NUMBER)	PARCEL AREA WITH LANDSCAPE (GSF)
	TOTAL	INSTRUCTIONAL	UTILITIES DISTRIBUTION		
1	76,000	70,000	6,000	265	580,000
2	30,000	30,000		275	153,000
3	200,000	200,000		283	492,000
4	120,000	120,000		284	251,000
5	107,000	90,000	17,000	268	302,000
6	70,000	70,000		343	324,000
7	100,000	100,000		0	411,000
8	85,000	85,000		335	421,000
9	82,000	65,000	17,000	321	288,000
10	160,000	160,000		432	378,000
11	130,000	130,000		402	684,000
12	130,000	130,000		405	373,000
Baseball Diamond				173	404,000
Maintenance Area				0	47,000
South Parking Expansion				110	67,000
TOTALS	1,290,000	1,250,000	40,000	3,896	5,175,000

TRAFFIC ANALYSIS

(Based on the transportation study completed by Fehr and Peers Associates)

Fehr & Peers Associates were retained to prepare a study of the transportation needs of the proposed Jordan Campus. They reviewed socioeconomic data, travel statistics, and planning standards to develop projections for trip generation, parking demand, and road assignment. The table (below) summarizes projected traffic loads and parking requirements.

FTE ENROLLMENT	TOTAL DAILY TRIPS	TOTAL DAILY AUTOMOBILE TRIPS	PARKING REQUIRED	
			MIN	MAX
12,000	18,850	15,360	3,800	4,400

The largest number of students will enter the campus from the north and east. The overwhelming majority will come by automobile, most in single-passenger vehicles. Approximately ten percent of the total daily volume will arrive in each of two peak periods, one in the morning and one in the evening.

BANGERTER ENTRY SIGNALIZATION

Based on UDOT designs and planning assumptions, the Master Plan showed right-in right-out access only at the Bangerter Highway entrance to the campus. This configuration would have forced vehicles arriving from the north to enter the campus via 90th South and 3400 West. Given the projected traffic volume, this layout seemed likely to generate delays and congestion.

To address this issue, traffic planners studied the impact of southbound traffic turning left at the intersection of the Bangerter Highway and 90th South to enter the campus at 3400 West. Delay analysis indicated that, with the background traffic levels expected to prevail in the year 2015, this would contribute to the failure of the Bangerter / 90th South intersection during peak morning travel periods.

Analysis with traf-netsim showed that the installation of a signal at the 9400 South/Bangerter Highway entrance to the campus would mitigate this problem and reduce daily delay on the Bangerter Highway system by approximately 5%. Accordingly, with the approval of West Jordan City planners, Utah Department of Transportation (UDOT) staff have given verbal support to the proposal to install a signal at 9400 South and Bangerter. This decision should be followed up to ensure that UDOT issues written approval of the signal and designs the highway with pavement loops at 9400 South to allow its future installation.

To accommodate the additional on-campus traffic back-ups that will result from the installation of a signal, planners explored four options for reconfiguring the entry (dual tear drop, jug handle, roundabout, and t-intersection). They selected a modified roundabout as the best response to campus design and circulation concerns.

MASS TRANSIT

On the recommendation of the Utah Transit Authority (UTA), the Development Plan shows a transit stop at the 9400 South entrance from the Bangerter Highway. UTA staff believe that one transit stop will suffice for the campus. Because the campus will be an interim stop rather than a terminal destination for bus routes, designers should balance bus delays on campus against potential pedestrian inconvenience to meet the double goal of delivering passengers as close as possible to their destinations while allowing buses to enter and exit quickly to avoid schedule disruption. The plan shows additional turnaround spurs at the 3400 West entries. One will accommodate bus traffic in the interim period until the Bangerter entry is constructed. To accommodate increased volume that may result from College efforts to encourage the use of mass transit, additional drop-off points have been incorporated in the plan.

ACCESS FOR SERVICE AND EMERGENCY VEHICLES

In addition to the access provided by campus roadways and parking areas, the central plaza area will be designed to afford access for vehicles in serious emergency situations only. On the east side, spur roads terminate at grids S1800 and S2880, but the intervening landscape area will include a surface of grass pavers or turf blocks that can support vehicular traffic, providing both emergency access and continuous access for campus service vehicles.

CAMPUS CIRCULATION DESIGN

The modified campus Development Plan shown here incorporates standards for road width, turning radii, and the design of intersections, parking lots, and service access detailed in the traffic study. Pedestrian links between buildings have been planned to reduce on-campus vehicular traffic and provide convenient access. Parking and parking aisles have been redesigned to minimize vehicular-pedestrian conflicts and to allow development in coordination with building phases. Pedestrian walkways will link the center of campus to 90th South and to neighborhood areas between the cul-de-sacs on 3400 West.

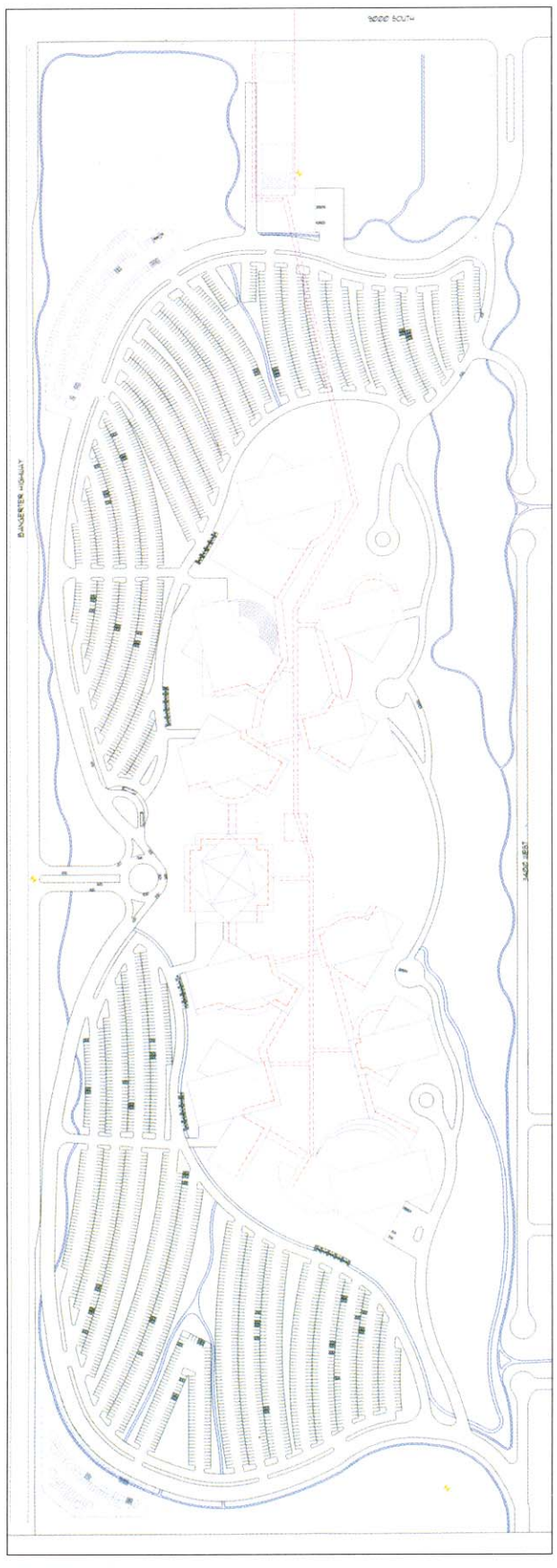
ENCLOSED PEDESTRIAN LINKS

The Development Plan shows enclosed below-grade pedestrian links to provide direct pedestrian access with protection from the weather and allow uninterrupted accessibility for the disabled. These pedestrian links will be separate from the campus utility distribution tunnel. Links will create continuous north-south connections between the buildings along the western tier of the campus. On the eastern tier, north-south links will connect buildings between grids S3000 and S2400 and buildings between grids S2040 and S1440. To avoid interruption of the utility tunnel and service distribution, the plan shows only one east-west pedestrian link, connecting the buildings between grids S2880 and S3000 and grids E600 and E720.

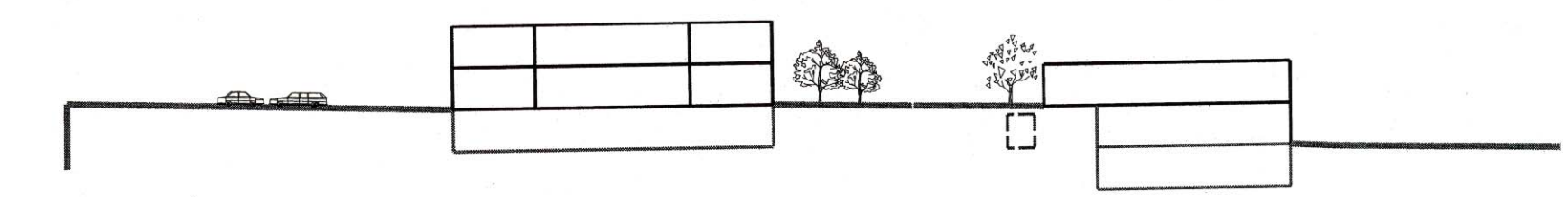
HILLSIDE CAMPUS: TOPOGRAPHIC REFINEMENT

Planners have refined the drawings to provide a more sophisticated consideration of the ways in which site topography can be developed. Full-scale site and topographic drawings can be found in the central files at Salt Lake Community College; additional information can be found in the Design Criteria. The approximate cut and fill required has been balanced across the site and in the parcels that constitute separate phases of development. Of course, this information is preliminary, and project designers will be responsible for verifying topographic information and creating actual designs to achieve the goals sketched here.

The campus is designed for accessibility, allowing pedestrian traffic to flow from the parking areas onto the plaza without the need for ramps or stairs. The base elevation at the main plaza, from a point at the Bangerter Entry roundabout to the west, is 4585′; the plaza slopes a total of two feet across its width to provide for drainage, with a base elevation at the east edge of 4583′.



TOPOGRAPHY AND LANDSCAPE



To preserve views and create a scale compatible with the residential neighborhood, the buildings on the western arc of the campus will be limited to two stories plus basement. Typical floor-to-floor height will be 14′ to 15′. The natural site slope will allow the design of taller buildings (2-4 stories plus basement) on the eastern side of the campus. It should be remembered, however, that the goal is to create a clustered village image. Varied building heights and roof pitches should be developed to prevent a uniform institutional appearance. Buildings may also take advantage of the site slope to provide on-grade access from both the plaza level and the landscaped meadow area below.

HARDSCAPE AND SOFTSCAPE

(From a review by Christine Barton)

To establish the appropriate balance for site development, planners reviewed the percentages of hard and soft surface landscaping on other state campuses. The Development Plan uses the typical ratio of 50 percent hardscape, 50 percent softscape.

GENERAL LANDSCAPE DESIGN APPROACH

The general principles established in the Master Plan Concept remain central to the Development Plan: landscape and water will be key elements in campus design. Campus landscaping will include recreational areas, pedestrian paths and walkways, screening, drainage areas, areas that support instructional programs, and plantings that make use of native and drought-tolerant materials. Throughout the campus, space should be reserved for art, sculpture, and landscape features in key locations. The conceptual elements outlined below have evolved in response to changes in the overall plan.

CONCEPTUAL LANDSCAPE ELEMENTS

(From a concept sketch developed by EDAW)

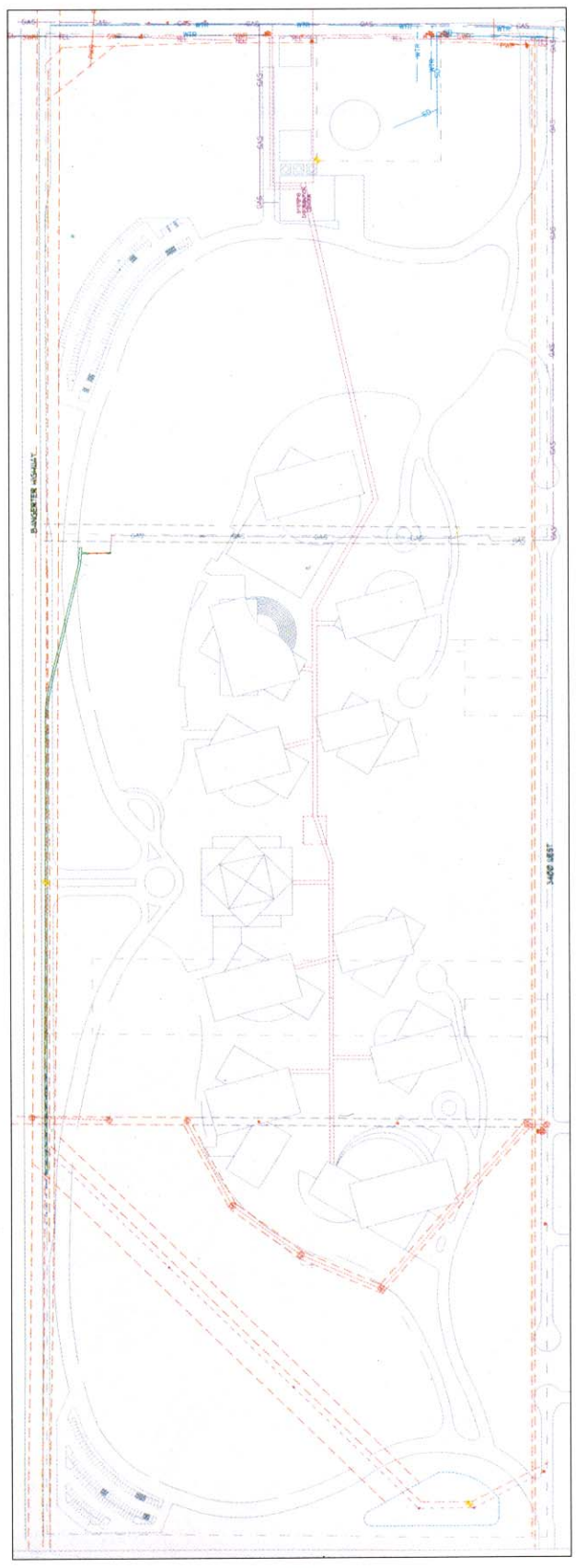
Organization of the Central Campus Landscape

A base line running north-south through the campus will be established at approximately grid E720. A series of lines placed perpendicular to this base line at regular intervals will provide structure for a landscape "carpet." In hardscape areas like the plaza, the perpendicular organizing lines may be expressed in paving, columns, seating cubes, or other design elements. In softscape areas, the organizational pattern could be articulated in a series of hedgerows that create outdoor classroom areas. To provide maximum flexibility, buildings and landscape features will be allowed to intersect the grid wherever programmatic needs dictate.

The Plazas and Commons

The plaza area running through the center of the campus will have three major gathering areas and a series of subsidiary landscape areas linked to individual buildings. Together they will provide outdoor spaces to accommodate a diverse array of formal and incidental activities ranging from individual study and relaxation to outdoor theater and large gatherings. The central plaza will have a major water/ landscape feature. This feature, which will have water only during the temperate months, will be designed with a slope shallow enough to allow pedestrians to walk through it easily. The utility tunnel will be enlarged below to provide a service area for the water feature. The central plaza, with its spectacular views of the adjacent meadow landscape and the Wasatch vista beyond, will include stepped areas designed for events, informal gatherings, discourse, and group study. The north plaza will include a terrace and a sloping amphitheater lawn to provide viewing areas for the stage below. The north plaza area will also include a mounded area designed for more intimate, contemplative uses like reading, sunning, sitting, and individual study. The south plaza will have a major water/landscape feature as a defining element.

Gateways and Perimeter Landscaping
Campus entries will be defined by significant landscape elements that may include berms planted with native and drought-tolerant landscaping, water features, and sculptural elements that create a sense of gateway and reinforce the campus identity. The perimeter landscaping will include hedgerows and orchards emerging from a grassland prairie to express the area's agricultural heritage.



SOILS

(From a report by Applied Geotechnical Engineering Consultants, Inc.)

The site typically has a topsoil layer of approximately 12″ over layers of gravel and interlayered clay, silt, and sand. Both gravel layers and clay-silt-sand layers have been characterized as medium dense to very dense. Groundwater was found in only one boring, at a depth of approximately 22′. The layer of high-quality topsoil constitutes a major resource, which should be preserved during construction.

EXISTING SITE UTILITIES AND UTILITY SERVICE

Existing site utilities include a well at grid S540/E80 (which will provide supplemental irrigation water), an abandoned gas line at grid S1320 (which will be removed), and a sewer line at grid S2880 (which will be rerouted). A sewer line and gas right-of-way run along the eastern edge of the site at grid E1320. The boundary between the cities of South Jordan and West Jordan runs east-west through the site just south of grid 2640.

UDOT has a 4′-5″ storm drainage line with a 50′ storm drain easement and a 50′ temporary construction easement from Bangerter Highway at grid S3000 to a detention basin at the southeast corner of the site (between grids S3840 and S3960 and grids E960 and E1200). This line must be maintained. A 78″ aqueduct with a 60′ easement (owned by the Bureau of Reclamation) runs along the eastern edge of the site at approximately grid E0; it encroaches on the site approximately 50′.

The campus will connect with the 12″ sewer line owned by the Salt Lake County Sewer Improvement District, which runs west to east across the site in the area between grids S2880 and grid S3240. This line has four existing manholes, with an invert of 4580′ at the west edge of the site and one of 4556′ at the east edge of the property. An existing storm drainage catch basin and manhole occur on the eastern edge of the property at grid S2880. Along the north edge of the site (grid S0), the campus will connect with existing water, telephone, and gas lines at grid E600 and an existing power line at grid E720.

UTILITIES DISTRIBUTION

A Utilities Distribution Center, located between grids S360 and S600 and grids E600 and E840, will serve the entire campus. Incoming service will be buried in tunnels, and all distribution will occur in a central walk-through utility tunnel system, running from the Utilities Distribution Center through the center of the plaza area (between grids E720 and E840). The tunnel will be designed so that its ceiling height is 2′-6″ to 3″-0″ below plaza level and its floor elevation is approximately 4′-0″ above building basement level. Piping, equipment, and controls should be easily available in the tunnel for inspection, maintenance, and replacement.

The Master Plan Concept called for smaller utility buildings to serve each cluster of three to four buildings. That concept has been rejected after analysis of the development options; planners have determined that all equipment should be placed at the Utilities Distribution Center or located within or immediately adjacent to the central utility tunnel for more efficient operation.

MECHANICAL SYSTEMS

(Summarized from the report of Bennion Associates, Mechanical Engineers, 7 January 1997, which should be referred to for additional details of system operation.)

Approach: Campus systems should be designed to be cost-effective throughout a long anticipated life cycle. For the greatest economy of operation, the campus should have a variable volume low-temperature hot water heating system with primary and secondary pumping systems, operating at approximately 230°F with a 70° temperature differential. The campus will rely on a central chilled water system with primary and secondary pumping systems operating at 42°F chilled water temperature, with a 16° temperature differential.

Utilities Distribution Center: The Utilities Distribution Center should be planned to provide space to accommodate pumps, expansion tanks, and other elements that will be needed to serve the entire campus. It should be designed so that it will be possible to provide adequate space for additional equipment in a logical manner as the campus grows. Features designed and equipment installed in initial phases should be compatible with anticipated future development.

Controls: The campus should have a central energy management / control system within the Utilities Distribution Center. The controls must be compatible and connected by modem with the Redwood Campus systems to allow all Jordan Campus readings, settings, and alarms to be available at either campus. Building controls should be compatible with the central control energy management system. Temperatures, pressures, flows, and control set points should be accessible and adjustable from both the individual building and the central system. Buildings should have direct digital controls with transducers and pneumatic operators, with local controls independent of the central system.

Heating: The initial phase should include boilers sized for a minimum of three buildings, compatible with the planned ultimate size and configuration of the plant. From its inception, the Utilities Distribution Center should have redundant capacity, a standby fuel source, and LowNox dual fuel burners.

Chilled Water: The initial chiller plant should be sized for a minimum of three buildings, with redundant capacity. The Utilities Distribution Center should have ceramic-fill cooling towers with masonry construction to match campus standards. They should be designed for summer and winter operation (with a winter heat exchanger) and sized for economy of scale, with capacity to serve more than the first phase construction if a larger size will provide life-cycle savings.

Building Distribution Systems: Each building should have a hydraulic bridge with hydraulic controls to mix water from distribution to design temperatures for the heating and cooling systems. Building distribution systems will include storage for domestic hot water, fan unit heating and cooling coils, and associated controls, monitors, meters, and distribution equipment.

Irrigation: The site should have a separate irrigation loop. The existing well on the site may provide supplemental irrigation water.

Fire Loop: A separate water main will be provided for fire service; each hydrant will be served from two directions.

ELECTRICAL SYSTEMS

(Summarized from the report of Spectrum Professional Services, Electrical Engineers, 1997, which should be referred to for additional details of system operation.)

Service and Distribution: Utah Power & Light will provide 12,470/7200 vac electrical service from 3400 West and can provide additional service (at extra cost) from two substations to improve reliability. North and south service loops will be provided. Cable should be supported to the ceiling of the tunnel and run on the opposite side of the tunnel from steam lines. Switchgear and transformers will serve individual buildings. Distribution panels will include digital meters and main overcurrent protection. A dry transformer with a 208/120 3-phase panel board should be provided.

Emergency Service: Each building should be served by an emergency generator and an associated distribution panel, meter, and overcurrent protection.

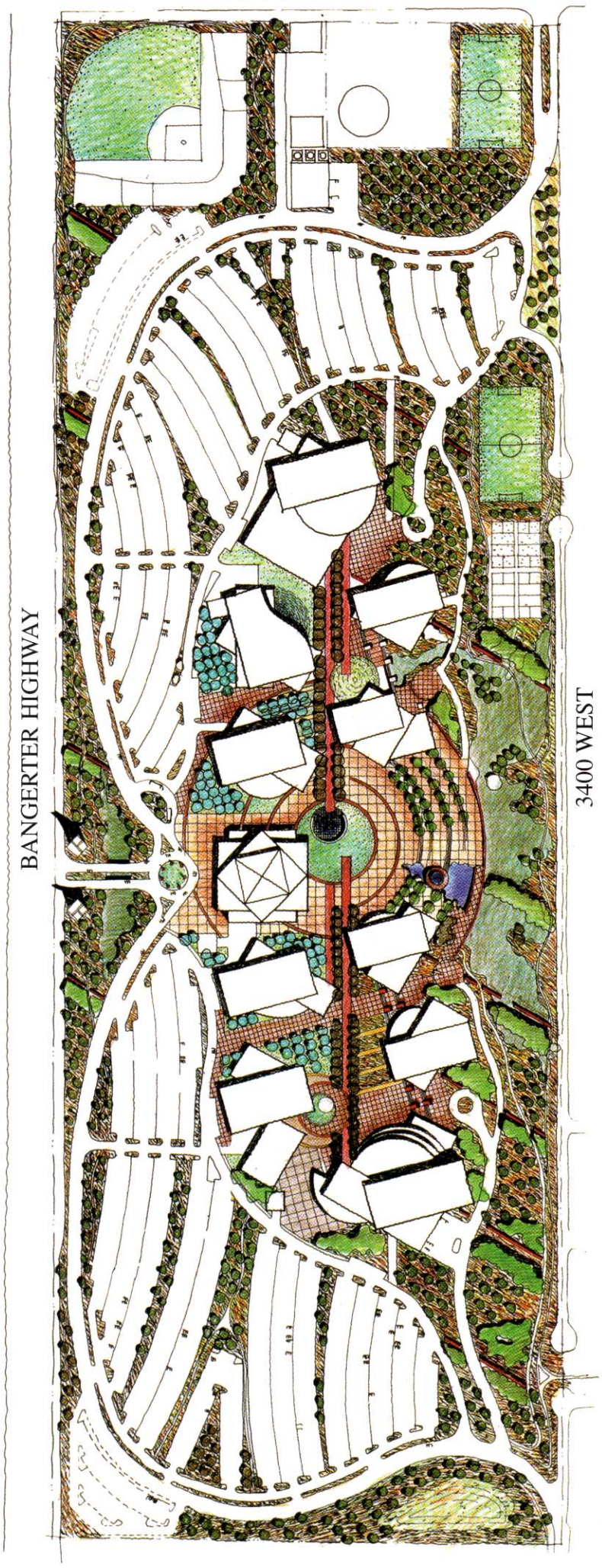
Exterior Lighting and Power: The campus standard for lighting streets, parking, and pedestrian walkways should be followed with consideration for long-term maintenance, efficiency, competitive fixture selection, and aesthetics. All lamps should be metal halide. Lighting should conform to levels established by IES. The design should include gfi convenience outlets. Parking, pedestrian and street lighting will be served from branch panels located in the Utilities Distribution Center.

Alarms, Life Safety, Security, Clock, and Program Systems: The campus should have central systems for fire alarming, life safety, intrusion detection, access control, clocks, and program systems, with battery backup where appropriate.

Voice, Data, and Cable TV Pathways: A cable tray system should be provided in the central utility tunnel as the pathway for fiber optic, copper voice conductors, and cable TV, which will be distributed by the campus.

SALT LAKE COMMUNITY COLLEGE MASTER PLAN

Master Plan

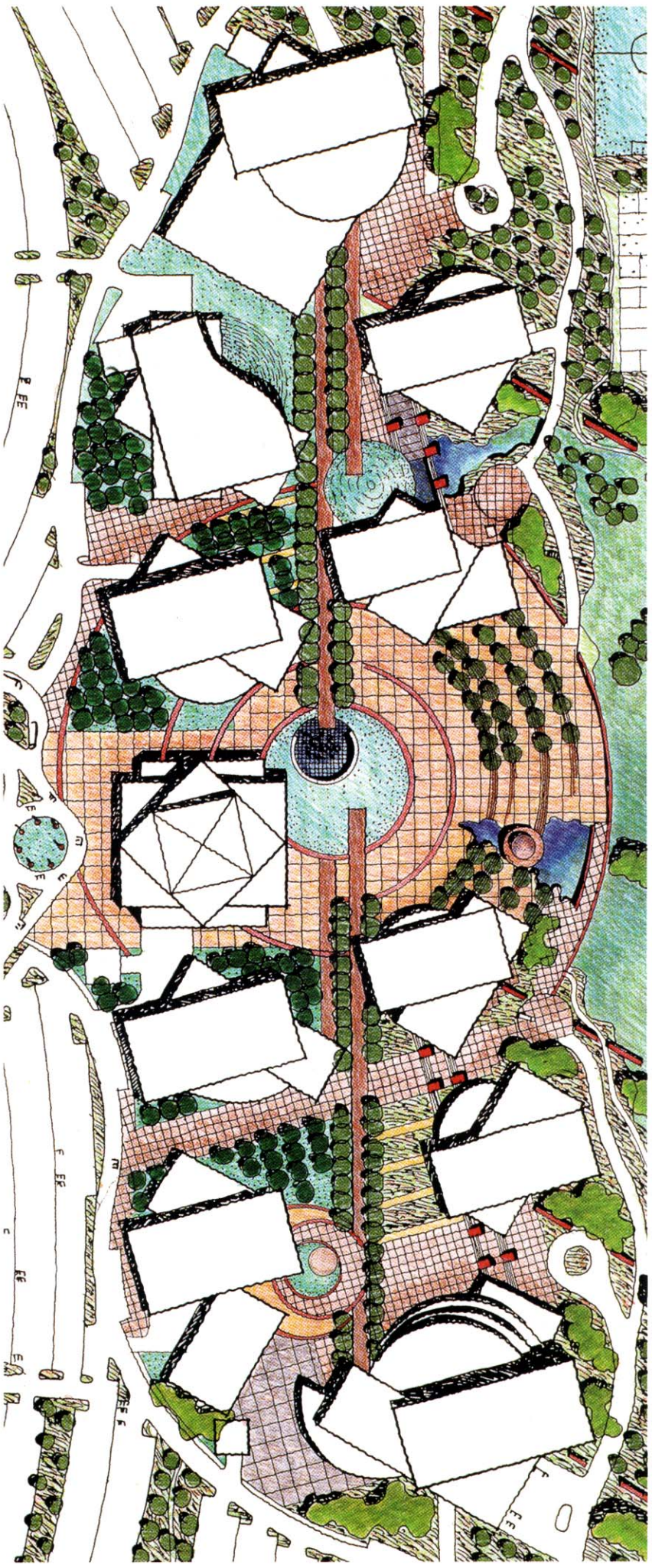


JORDAN SITE

Hart Fisher Smith & Associates
EDAW

SALT LAKE COMMUNITY COLLEGE MASTER PLAN

Core Area



JORDAN SITE

Hart Fisher Smith & Associates
EDAW